

**CONSTRUCTION PERMIT  
OFFICE OF AIR MANAGEMENT**

**Covermaster, Inc.  
57784 C.R. 3  
Elkhart, Indiana 46517**

This permit is issued to the above mentioned company (herein known as the Permittee) under the provisions of 326 IAC 2-1 and 40 CFR 52.780, with conditions listed on the attached pages.

Construction Permit No.: CP-039-9337-00137	
Issued by:  Paul Dubenetzky, Branch Chief Office of Air Management	Issuance Date:

## SECTION A SOURCE SUMMARY

This permit is based on information requested by the Indiana Department of Environmental Management (IDEM), Office of Air Management (OAM), and presented in the permit application.

### A.1 General Information

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The Permittee owns and operates a fiberglass truck cap production process.

Responsible Official: James Shafer  
Source Address: 57784 C.R. 3, Elkhart, Indiana 46517  
Mailing Address: (same)  
SIC Code: 3799  
County Location: Elkhart County  
County Status: Attainment for all criteria pollutants  
Source Status: State Construction and Operation Permit  
Minor Source, under PSD Rules;  
Major Source, Section 112 of the Clean Air Act

### 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:

- (a) one (1) large paint booth exhausting at stacks SV-14 and SV-15 with dry filters to control overspray capable of painting up to 195 caps per day;
- (b) a mold repair area with three (3) fiberglass mold production booths producing 2.5 molds per week or less and exhausting through stacks SV-16 through SV-18;
- (c) a truck cap area with one (1) chop booth exhausting through stacks SV-1 and SV-2, and one (1) gel coat application booth producing 195 caps per day or less and exhausting through stack SV-3;
- (d) one (1) natural gas fired curing oven with a maximum heat input rate of 2.0 million British thermal units per hour exhausting through stack SV-20;
- (e) two (2) air make-up units fired by natural gas with maximum heat input rates of 2.97 and 2.00 million British thermal units per hour, respectively, exhausting through stacks AM-1 and AM-2, respectively;
- (f) four (4) radiant tube heaters fired by natural gas with a maximum heat input rate of 0.1 million British thermal units per hour, each, exhausting through stacks SV-3, 5, 6, and 13;
- (g) four (4) natural gas fired Lare radiant tube heaters with a maximum heat input rate of 0.15 million British thermal units per hour, each, exhausting through stacks SV-8, 9, 10, and 12;
- (h) miscellaneous cutting and sanding operations for fiberglass and wood consisting of hand sanders, hand cutters, hand grinders and a chop saw;

- (i) two (2) variable vapor space liquid storage tanks identified as SV-21 and SV-22 holding polyester and resin, respectively.
- (j) one (1) existing natural gas fired furnace with a maximum heat input rate of 0.464 million British thermal units per hour exhausting through stack SV-19 located in Building 1.

**A.3 Part 70 Applicability [326 IAC 2-7-2]**

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This stationary source, required to have a Part 70 permit as described in 326 IAC 2-7-2(a), has submitted to the Indiana Department of Environmental Management (IDEM), Office of Air Management (OAM), a Part 70 (T037-7354-00137) application on December 4, 1996. The equipment being reviewed under this permit shall be incorporated in the submitted Part 70 application.

**Section B Construction Conditions**

**General Construction Conditions [326 IAC 2-1-3]**

**B.1 Allowable Emissions**

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That the data and information supplied with the application shall be considered part of this permit. Prior to any proposed change in construction which may affect allowable emissions, the change must be approved by the Office of Air Management (OAM).

**B.2 General Rule Applicability**

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This permit 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.

**B.3 Effective Date of the Permit [IC 13-15-5-3]**

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Pursuant to IC 13-15-5-3, Sections C and D.1 of this permit become effective upon its issuance.

**B.4 Revocation of Permits [326 IAC 2-1-9(b)]**

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

**B.5 Modification of Construction Conditions**

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Notwithstanding Condition B.6, all requirements of these construction conditions shall remain in effect unless modified in a manner consistent with procedures established for modifications of construction permits pursuant to 326 IAC 2 (Permit Review Rules).

**B.6 First Time Operation Permit [326 IAC 2-1-4]**

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That this document shall also become a first-time operation permit pursuant to 326 IAC 2-1-4 (Operating Permits) when, prior to start of operation, the following requirements are met:

- (a) The attached affidavit of construction shall be submitted to the Office of Air Management (OAM), Permit Administration & Development Section, verifying that the facilities were constructed as proposed in the application. The facilities covered in the Construction Permit may begin operating on the date the Affidavit of Construction is postmarked or hand delivered to IDEM.

- (b) If construction is completed in phases; i.e., the entire construction is not done continuously, a separate affidavit must be submitted for each phase of construction. Any permit conditions associated with operation start up dates such as stack testing for New Source Performance Standards (NSPS) shall be applicable to each individual phase.
- (c) Permittee shall receive an Operation Permit Validation Letter from the Chief of the Permit Administration & Development Section and attach it to this document.
- (d) The operation permit will be subject to annual operating permit fees pursuant to 326 IAC 2-7-19 (Fees).

## **Section C                      Source Operation Conditions**

Entire Source

### **General Operation Conditions [326 IAC 2-1-4]**

#### **C.1      General Operation Conditions**

- (a) The data and information supplied in the application shall be considered part of this permit. Prior to any change in the operation which may result in an increase in allowable emissions exceeding those specified in 326 IAC 2-1-1 (Construction and Operating Permit Requirements), the change must be approved by the Office of Air Management (OAM).
- (b) The permittee shall 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.

#### **C.2      Preventive Maintenance Plan [326 IAC 1-6-3]**

Pursuant to 326 IAC 1-6-3 (Preventive Maintenance Plans), the Permittee shall prepare and maintain a preventive maintenance plan, including the following information:

- (a) Identification of the individual(s) responsible for inspecting, maintaining, and repairing emission control devices.
- (b) A description of the items or conditions that will be inspected and the inspection schedule for said items or conditions.
- (c) Identification of the replacement parts which will be maintained in inventory for quick replacement.

The preventive maintenance plan shall be submitted to IDEM, OAM upon request and shall be subject to review and approval.

**C.3 Transfer of Permit [326 IAC 2-1-6]**

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Pursuant to 326 IAC 2-1-6 (Transfer of Permits):

- (a) In the event that ownership of this truck cap production line is changed, the Permittee shall notify OAM, Permit Branch, within thirty (30) days of the change. Notification shall include the date or proposed date of said change.
- (b) The written notification shall be sufficient to transfer the permit from the current owner to the new owner.
- (c) The OAM shall reserve the right to issue a new permit.

**C.4 Permit Revocation [326 IAC 2-1-9(a)]**

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Pursuant to 326 IAC 2-1-9(a)(Revocation of Permits), this permit to construct and operate may be revoked for any of the following causes:

- (a) Violation of any conditions of this permit.
- (b) Failure to disclose all the relevant facts, or misrepresentation in obtaining this permit.
- (c) Changes in regulatory requirements that mandate either a temporary or permanent reduction of discharge of contaminants. However, the amendment of appropriate sections of this permit shall not require revocation of this permit.
- (d) Noncompliance with orders issued pursuant to 326 IAC 1-5 (Episode Alert Levels) to reduce emissions during an air pollution episode.
- (e) For any cause which establishes in the judgment of IDEM, the fact that continuance of this permit is not consistent with purposes of 326 IAC 2-1 (Permit Review Rules).

**C.5 Availability of Permit [326 IAC 2-1-3(l)]**

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Pursuant to 326 IAC 2-1-3(l), the Permittee shall maintain the applicable permit on the premises of this source and shall make this permit available for inspection by the IDEM or other public official having jurisdiction.

**C.6 Opacity Limitations [326 IAC 5-1-2]**

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Pursuant to 326 IAC 5-1-2 (Visible Emission Limitations) except as provided in 326 IAC 5-1-3 (Temporary Exemptions), the visible emissions shall meet the following:

- (a) visible emissions shall not exceed an average of 40% opacity in 24 consecutive readings.
- (b) visible emissions shall not exceed 60% opacity for more than a cumulative total of 15 minutes (60 readings) in a 6-hour period.

**C.7 Open Burning [326 IAC 4-1] IIC 13-17-9]**

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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.

**C.8 Incineration [326 IAC 4-2] [326 IAC 9-1-2(3)]**

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

**C.9 Emergency Reduction Plans [326 IAC 1-5-2]**

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Pursuant to 326 IAC 1-5-2 (Emergency Reduction Plans; Submission):

(a) The Permittee shall prepare written emergency reduction plans (ERPs) consistent with safe operating procedures.

(b) These ERPs shall be submitted for approval to:

Indiana Department of Environmental Management  
Compliance Branch, Office of Air Management  
100 North Senate Avenue, P.O. Box 6015  
Indianapolis, Indiana 46206-6015

within 180 calendar days from the issuance date of this permit.

(c) If the ERP is disapproved by IDEM, OAM, the Permittee shall have an additional thirty (30) days to resolve the differences and submit an approvable ERP. If after this time, the Permittee does not submit an approvable ERP, IDEM, OAM, shall supply such a plan.

(d) These ERPs shall state those actions that will be taken, when each episode level is declared, to reduce or eliminate emissions of the appropriate air pollutants.

(e) Said ERPs shall also identify the sources of air pollutants, the approximate amount of reduction of the pollutants, and a brief description of the manner in which the reduction will be achieved.

(f) Upon direct notification by IDEM, OAM, that a specific air pollution episode level is in effect, the Permittee shall immediately put into effect the actions stipulated in the approved ERP for the appropriate level. [326 IAC 1-5-3]

**C.10 Asbestos Abatement Projects - Accreditation [326 IAC 14-10] [326 IAC 18]**

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[40 CFR 61, Subpart M]

Prior to the commencement of any demolition or renovation activities, the Permittee shall use an Indiana accredited asbestos inspector to inspect thoroughly the affected facility or part of the facility where the demolition or renovation operation will occur for the presence of asbestos, including Category I and Category II nonfriable asbestos containing material. The requirement that the inspector be accredited is federally enforceable.

**Compliance Monitoring Requirements**

**C.11 Compliance Monitoring**

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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 no more than ninety (90) days after receipt of this permit. If due to circumstances beyond its control, this schedule cannot be met, the Permittee shall notify:

Indiana Department of Environmental Management  
Compliance Data Section, Office of Air Management  
100 North Senate Avenue, P.O. Box 6015  
Indianapolis, Indiana 46206-6015

in writing no more than ninety (90) days after receipt of this permit, with full justification of the reasons for inability to meet this date and a schedule which it expects to meet. If a denial of the request is not received before the monitoring is fully implemented, the schedule shall be deemed approved.

**C.12 Monitoring Methods [326 IAC 3]**

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Any monitoring or testing performed to meet the requirements of this permit shall be performed according to the provisions of 326 IAC 3, 40 CFR 60, Appendix A, or other approved methods as specified in this permit.

**C.13 Compliance Monitoring Plan - Failure to Take Response Steps**

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- (a) The Permittee is required to implement a compliance monitoring plan to ensure that reasonable information is available to evaluate its continuous compliance with applicable requirements. This compliance monitoring plan is comprised of:
- (1) This condition;
  - (2) The Compliance Determination Requirements in Section D of this permit;
  - (3) The Compliance Monitoring Requirements in Section D of this permit;
  - (4) The Record Keeping and Reporting Requirements in Section C (Monitoring Data Availability, General Record Keeping Requirements, and General Reporting Requirements) and in Section D of this permit; and
  - (5) A Compliance Response Plan (CRP) for each compliance monitoring condition of this permit. CRP's shall be submitted to IDEM, OAM, upon request and shall be subject to review and approval by IDEM, OAM. The CRP shall be prepared within ninety (90) days after issuance of this permit by the Permittee and maintained on site, and is comprised of :
    - (A) Response steps that will be implemented in the event that compliance related information indicates that a response step is needed pursuant to the requirements of Section D of this permit; and
    - (B) A time schedule for taking such response steps including a schedule for devising additional response steps for situations that may not have been predicted.
- (b) For each compliance monitoring condition of this permit, appropriate response steps shall be taken when indicated by the provisions of that compliance monitoring condition. Failure to perform the actions detailed in the compliance monitoring conditions or failure to take the response steps within the time prescribed in the Compliance Response Plan, shall constitute a violation of the permit unless taking the response steps set forth in the Compliance Response Plan would be unreasonable.

- (c) After investigating the reason for the excursion, the Permittee is excused from taking further response steps for any of the following reasons:
  - (1) The monitoring equipment malfunctioned, giving a false reading. This shall be an excuse from taking further response steps providing that prompt action was taken to correct the monitoring equipment.
  - (2) The Permittee has determined that the compliance monitoring parameters established in the permit conditions are technically inappropriate, has previously submitted a request for an administrative amendment to the permit, and such request has not been denied or;
  - (3) An automatic measurement was taken when the process was not operating; or
  - (4) The process has already returned to operating within "normal" parameters and no response steps are required.
- (d) Records shall be kept of all instances in which the compliance related information was not met and of all response steps taken.

C.14 Asbestos Abatement Projects [326 IAC 14-10] [326 IAC 18-1] [40 CFR 61.140]

- (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 insure 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
  - (3) Waste disposal site.
- (c) The Permittee shall ensure that the notice is postmarked or delivered according to the guidelines set forth in 326 IAC 14-10-3(2).
- (d) The notice to be submitted shall include the information enumerated in 326 IAC 14-10-3(3).

All required notifications shall be submitted to:

Indiana Department of Environmental Management  
Asbestos Section, Office of Air Management  
100 North Senate Avenue, P.O. Box 6015  
Indianapolis, Indiana 46206-6015

- (e) **Procedures for Asbestos Emission Control**  
The Permittee shall comply with the emission control procedures in 326 IAC 14-10-4 and 40 CFR 61.145(c). Per 326 IAC 14-10-4 emission control requirements are mandatory 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) **Indiana Accredited 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 Accredited Asbestos Inspector to thoroughly inspect the affected portion of the facility for the presence of asbestos. The requirement that the inspector be accredited is federally enforceable.

## **Record Keeping and Reporting Requirements**

### **C.15 Emission Statement [326 IAC 2-6]**

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- (a) The Permittee shall submit a certified, annual emission statement that meets the requirements of 326 IAC 2-6 (Emission Reporting). This annual statement must be received by April 15 of each year and must comply with the minimum requirements specified in 326 IAC 2-6-4. The submittal should cover the period defined in 326 IAC 2-6-2(8) (Emission Statement Operating Year). The annual statement must be submitted to:  
  
Indiana Department of Environmental Management  
Technical Support and Modeling Section, Office of Air Management  
100 North Senate Avenue, P.O. Box 6015  
Indianapolis, Indiana 46206-6015
- (b) The annual emission statement 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, OAM, on or before the date it is due.

### **C.16 General Record Keeping Requirements**

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- (a) Records of all required monitoring data and support information 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 kept at the source location and available within one (1) hour upon verbal request of an IDEM, OAM representative, for a minimum of three (3) years. They may be stored elsewhere for the remaining two (2) years providing they are made available within thirty (30) days after written request.

- (b) Records of required monitoring information shall include, where applicable:
  - (1) The date, place, and time of sampling or measurements;
  - (2) The dates analyses were performed;
  - (3) The company or entity performing the analyses;
  - (4) The analytic techniques or methods used;
  - (5) The results of such analyses; and
  - (6) The operating conditions existing at the time of sampling or measurement.
  
- (c) Support information shall include, where applicable:
  - (1) Copies of all reports required by this permit;
  - (2) All original strip chart recordings for continuous monitoring instrumentation;
  - (3) All calibration and maintenance records;
  - (4) Records of preventive maintenance shall be sufficient to demonstrate that improper maintenance did not cause or contribute to a violation of any limitation on emissions or potential to emit. To be relied upon subsequent to any such violation, these records may include, but are not limited to: work orders, parts inventories, and operator's standard operating procedures. All records shall briefly describe what maintenance and response steps were taken and indicate who performed the tasks.
  
- (d) All record keeping requirements not already legally required shall be implemented within ninety (90) days of permit issuance.

**C.17 General Reporting Requirements**

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- (a) To affirm that the source has met all the requirements stated in this permit the source shall submit a Quarterly Compliance Report. Any deviation from the requirements and the date(s) of each deviation must be reported.
  
- (b) The report required in (a) of this condition and reports required by conditions in Section D of this permit shall be submitted to:

Indiana Department of Environmental Management  
Compliance Data Section, Office of Air Management  
100 North Senate Avenue, P. O. Box 6015  
Indianapolis, Indiana 46206-6015

- (c) Unless otherwise specified in this permit, any notice, report, or other submission required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAM, on or before the date it is due.
- (d) Unless otherwise specified in this permit, any quarterly report shall be submitted within thirty (30) days of the end of the reporting period.
- (e) All instances of deviations must be clearly identified in such reports. A reportable deviation is an exceedance of a permit limitation or a failure to comply with a requirement of the permit or a rule. It does not include:
  - (1) An excursion from compliance monitoring parameters as identified in Section D of this permit unless tied to an applicable rule or limit; or
  - (2) A malfunction as defined in 326 IAC 1-6-2; or
  - (3) Failure to implement elements of the Preventive Maintenance Plan unless lack of maintenance has caused or contributed to a deviation.
  - (4) Failure to make or record information required by the compliance monitoring provisions of Section D unless such failure exceeds 5% of the required data in any calendar quarter.

A Permittee's failure to take the appropriate response step when an excursion of a compliance monitoring parameter has occurred or failure to monitor or record the required compliance monitoring is a deviation.
- (f) Any corrective actions or response steps taken as a result of each deviation must be clearly identified in such reports.
- (g) The first report shall cover the period commencing on the date of issuance of this permit and ending on the last day of the reporting period.

**C.18 Compliance with 40 CFR 82 and 326 IAC 22-1**

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

- (a) Persons opening appliances for maintenance, service, repair or disposal must comply with the required practices pursuant to 40 CFR 82.156
- (b) Equipment used during the maintenance, service, repair or disposal of appliances must comply with the standards for recycling and recovery equipment pursuant to 40 CFR 82.158.
- (c) Persons performing maintenance, service, repair or disposal of appliances must be certified by an approved technician certification program pursuant to 40 CFR 82.161.

## SECTION D.1 FACILITY OPERATION CONDITIONS

- (a) one (1) large paint booth exhausting at stacks SV-14 and SV-15 with dry filters to control overspray capable of painting up to 195 caps per day;
- (b) a mold repair area with three (3) fiberglass mold production booths producing 2.5 molds per week or less and exhausting through stacks SV-16 through SV-18;
- (c) a truck cap area with one (1) chop booth exhausting through stacks SV-1 and SV-2, and one (1) gel coat application booth producing 195 caps per day or less and exhausting through stack SV-3;
- (d) one (1) natural gas fired curing oven with a maximum heat input rate of 2.0 million British thermal units per hour exhausting through stack SV-20;
- (e) two (2) air make-up units fired by natural gas with maximum heat input rates of 2.97 and 2.00 million British thermal units per hour, respectively, exhausting through stacks AM-1 and AM-2, respectively;
- (f) four (4) radiant tube heaters fired by natural gas with a maximum heat input rate of 0.1 million British thermal units per hour, each, exhausting through stacks SV-3, 5, 6, and 13;
- (g) four (4) natural gas fired Lare radiant tube heaters with a maximum heat input rate of 0.15 million British thermal units per hour, each, exhausting through stacks SV-8, 9, 10, and 12;
- (h) miscellaneous cutting and sanding operations for fiberglass and wood consisting of hand sanders, hand cutters, hand grinders and a chop saw;
- (i) two (2) variable vapor space liquid storage tanks identified as SV-21 and SV-22 holding polyester and resin, respectively.
- (j) one (1) existing natural gas fired furnace with a maximum heat input rate of 0.464 million British thermal units per hour exhausting through stack SV-19 located in Building 1.

### Emission Limitations and Standards

#### D.1.1 Particulate Matter (PM) [326 IAC 6-3-2(c)]

Pursuant to 326 IAC 6-3 (Process Operations):

- (a) The gel coat, resin and paint spray booths shall comply with 326 IAC 6-3-2(c) using the following equation:

$$E = 4.10P^{0.67} \quad \text{where: } E = \text{rate of emission in pounds per hour,}$$

P = process weight in tons per hour, if  
P is equal to or less than 60,000 lbs/hr (30 tons/hr)

or

$$E = 55.0P^{0.11} - 40$$

where: E = rate of emission in pounds per hour,  
P = process weight in tons per hour, if  
P is greater than 60,000 lbs/hr (30 tons/hr).

#### D.1.2 Volatile Organic Compounds (VOC) [326 IAC 8-1-6]

- (a) Pursuant to 326 IAC 8-1-6, the new large paint booth, mold production booths, chop booth, and gel coat booth are subject to the requirements of 326 IAC 8-1-6, which requires that the Best Available Control Technology (BACT) be used to control VOC emissions.
- (b) The potential to emit (PTE) VOC from these facilities shall be less than 95.3 tons per twelve (12) consecutive month period. For the purpose of determining compliance with this limit, each ton of volatile organic HAP emitted from resins and gel coats applied, as determined by the criteria set forth in D.1.3(a)(1) and (2), shall be considered a ton of VOC.
- (c) This limit on the potential to emit (PTE) VOC is required as a component of the BACT determination and, in addition to the requirements of 326 IAC 2-1-3.4 (New Source Toxics Control) specified in Condition D.1.3, shall satisfy the BACT requirements for this new source.

#### D.1.3 New Source Toxics Control [26 IAC 2-1-3.4]

Pursuant to the MACT determination under 326 IAC 2-1-3.4, operating conditions for the new large paint booth, mold production booths, chop booth, and gel coat booth shall be the following:

- (a) Use of resins and gel coats shall be limited such that the potential to emit (PTE) volatile organic HAP from resins and gel coats only shall be less than 95.3 tons per twelve (12) consecutive month period. Compliance with this limit shall be determined based upon the following criteria:
  - (1) Monthly usage by weight, monomer content, method of application, and other emission reduction techniques for each gel coat and resin shall be recorded. Volatile organic HAP emissions shall be calculated by multiplying the usage of each gel coat and resin by the emission factor that is appropriate for the monomer content, method of application, and other emission reduction techniques for each gel coat and resin, and summing the emissions for all gel coats and resins. Emission factors shall be obtained from the reference approved by IDEM, OAM.
  - (2) Until such time that new emissions information is made available by U.S. EPA in its AP-42 document or other U.S. EPA-approved form, emission factors shall be taken from the following reference approved by IDEM, OAM: "CFA Emission Models for the Reinforced Plastics Industries", Composites Fabricators Association, February 28, 1998, and shall not exceed 32.3% styrene emitted per weight of gel coat applied and 17.7% styrene emitted per weight of resin applied. For the purposes of these emission calculations, monomer in resins and gel coats that is not styrene shall be considered as styrene on an equivalent weight basis.

- (b) Resins and gel coats used, including filled resins and tooling resins and gel coats, shall be limited to a maximum of 35 percent (35%) by weight for resins, 37 percent (37%) by weight for gel coats or their equivalent on an emissions mass basis. Monomer contents shall be calculated on a neat basis, i.e., excluding any filler. Compliance with these monomer content limits shall be demonstrated on a monthly basis.

The use of resins with monomer contents lower than 35%, gel coats with monomer contents lower than 37%, and/or additional emission reduction techniques approved by IDEM, OAM, may be used to offset the use of resins with monomer contents higher than 35%, and/or gel coats with monomer contents higher than 37%. This is allowed to meet the monomer content limits for resins and gel coats, and shall be calculated on an equivalent emissions mass basis as shown below:

$$\frac{(\text{Emissions from } >35\% \text{ resin or } >37\% \text{ gel coat}) - (\text{Emissions from } 35\% \text{ resin or } 37\% \text{ gel coat})}{\# (\text{Emissions from } 35\% \text{ resin or } 37\% \text{ gel coat}) - (\text{Emissions from } <35\% \text{ resin, } <37\% \text{ gel coat, and/or other emission reduction techniques})}$$

Where: Emissions, lb or ton = M (mass of resin or gel coat used, lb or ton) \* EF  
(Monomer emission factor for resin or gel coat used, %);

EF, Monomer emission factor = emission factor, expressed as % styrene emitted per weight of resin applied, which is indicated by the monomer content, method of application, and other emission reduction techniques for each gel coat and resin used.

- (c) Flow coaters, a type of non-spray application technology of a design and specifications to be approved by IDEM, OAM, shall be used in the following manner:
- (1) to apply 50% of all neat resins within 6 months of commencement of operation.
  - (2) to apply 100% of all neat resins used within 1 year of commencement of operation.

If after 1 year of operation it is not possible to apply a portion of neat resins with flow coaters, equivalent emissions reductions must be obtained via use of other techniques elsewhere in the process. Examples of other techniques include, but are not limited to, lower monomer content resins and gel coats, closed molding, vapor suppression, or installing a control device with an overall reduction efficiency of 95%.

- (d) Optimized spray techniques according to a manner approved by IDEM shall be used for coatings, gel coats and filled resins (where fillers are required for corrosion or fire retardant purposes) at all times. Optimized spray techniques include, but are not limited to, the use of airless, air-assisted airless, high volume low pressure (HVLP), or other spray applicators demonstrated to the satisfaction of IDEM, OAM, to be equivalent to the spray applicators listed above.

HVLP spray is the technology used to apply material to substrate by means of application equipment that operates between one-tenth (0.1) and ten (10) pounds per square inch gauge (psig) air pressure measured dynamically at the center of the air cap and at the air horns of the spray system.

- (e) The listed work practices shall be followed:
- (1) To the extent possible, a non-VOC, non-HAP solvent shall be used for cleanup.
  - (2) Cleanup solvent containers shall be used to transport solvent from drums to work.
  - (3) Clean up stations shall be closed containers having soft gasketed spring-loaded closures and shall be kept completely closed when not in use.
  - (4) Cleanup rags saturated with solvent shall be stored, transported, and disposed of in containers that are closed tightly.
  - (5) The spray guns used shall be the type that can be cleaned without the need for spraying the solvent into the air.
  - (6) All solvent sprayed during cleanup or resin changes shall be directed into containers. Such containers shall be closed as soon as solvent spraying is complete and the waste solvent shall be disposed of in such a manner that evaporation is minimized.
  - (7) Storage containers used to store VOC- and/or HAP- containing materials shall be kept covered when not in use.

### **Compliance Determination Requirements**

#### **D.1.4 Testing Requirements**

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Testing of these facilities are not specifically required by this permit. This does not preclude testing requirements on this facility under 326 IAC 2-7-5 and 326 IAC 2-7-6.

### **Compliance Monitoring Requirements**

#### **D.1.5 Particulate Matter (PM)**

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The dry filters for PM control shall be in operation at all times when the large paint booth is in operation.

#### **D.1.6 Monitoring**

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- (a) Daily inspections shall be performed to verify the placement, integrity and particle loading of the filters. To monitor the performance of the dry filters, daily observations shall be made of the overspray from the surface coating booth stacks while one or more of the booths are in operation. The Compliance Response Plan shall be followed whenever a condition exists which should result in a response step. Failure to take response steps in accordance with Section C - Compliance Monitoring Plan - Failure to Take Response Steps, shall be considered a violation of this permit.

- (b) Weekly inspections shall be performed of the coating emissions from the stack and the presence of overspray on the rooftops and the nearby ground. The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when a noticeable change in overspray emission, or evidence of overspray emission is observed. The Compliance Response Plan shall be followed whenever a condition exists which should result in a response step. Failure to take response steps in accordance with Section C - Compliance Monitoring Plan - Failure to Take Response Steps, shall be considered a violation of this permit.
- (c) Additional inspections and preventive measures shall be performed as prescribed in the Preventive Maintenance Plan.

### **Record Keeping and Reporting Requirements**

#### **D.1.7 Record Keeping Requirements**

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- (a) To document compliance with Conditions D.1.2 and D.1.3, the Permittee shall maintain records in accordance with (1) through (5) below. Records maintained for (1) through (5) shall be taken monthly and shall be complete and sufficient to establish compliance with the volatile organic compounds (VOC) and volatile organic HAP emission limits established.
    - (1) The usage by weight and monomer content of each resin and gel coat, and the usage by weight and VOC content of all other coatings. Records shall include purchase orders, invoices, and material safety data sheets (MSDS) necessary to verify the type and amount used.
    - (2) A log of the dates of use;
    - (3) Method of application and other emission reduction techniques for each resin and gel coat used;
    - (4) The calculated total volatile organic HAP emissions from resin and gel coat used for each month.
    - (5) The calculated total volatile organic compound (VOC) emissions from all coatings, including resin and gel coat, used for each month.
  - (b) To document compliance with Condition D.1.6, the Permittee shall maintain a log of daily overspray observations, daily and weekly inspections, and those additional inspections prescribed by the Preventive Maintenance Plan.
  - (c) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

#### **D.1.8 Reporting Requirements**

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A quarterly summary of the information to document compliance with Condition D.1.2 shall be submitted to the addresses listed in Section C - General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported.

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
 OFFICE OF AIR MANAGEMENT  
 COMPLIANCE DATA SECTION**

**Quarterly Report**

Source Name: Covermaster, Inc.  
 Source Address: 57784 C.R. 3, Elkhart, Indiana 46517  
 Mailing Address: (same)  
 FESOP No.: 039-9337-00137  
 Facility: fiberglass truck cap production line  
 Parameter: volatile organic compound (VOC) usage  
 Limit: VOC usage, including volatile organic HAP from resins and gel coats, not to exceed 95.3 tons per twelve (12) consecutive month period.

YEAR: \_\_\_\_\_

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

- 9 No deviation occurred in this quarter.
- 9 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 Management

### Technical Support Document (TSD) for New Construction and Operation

#### Source Background and Description

Source Name: Covermaster, Inc.  
Source Location: 57784 C.R. 3, Elkhart, Indiana, 46517  
County: Elkhart  
Construction Permit No.: CP-039-9337-00137  
SIC Code: 3799  
Permit Reviewer: Janusz Johnson

The Office of Air Management (OAM) has reviewed an application from Covermaster, Inc. relating to the construction and operation of a fiberglass truck cap production line to be located in Building 2, consisting of the following equipment:

- (a) one (1) large paint booth exhausting at stacks SV-14 and SV-15 with dry filters to control overspray capable of painting up to 195 caps per day;
- (b) a mold repair area with three (3) fiberglass mold production booths producing 2.5 molds per week or less and exhausting through stacks SV-16 through SV-18;
- (c) a truck cap area with one (1) chop booth exhausting through stacks SV-1 and SV-2, and one (1) gel coat application booth producing 195 caps per day or less and exhausting through stack SV-3;
- (d) one (1) natural gas fired curing oven with a maximum heat input rate of 2.0 million British thermal units per hour exhausting through stack SV-20;
- (e) two (1) air make-up units fired by natural gas with maximum heat input rates of 2.97 and 2.00 million British thermal units per hour, respectively, exhausting through stacks AM-1 and AM-2, respectively;
- (f) four (4) radiant tube heaters fired by natural gas with a maximum heat input rate of 0.1 million British thermal units per hour, each, exhausting through stacks SV-3, 5, 6, and 13;
- (g) four (4) natural gas fired Lare radiant tube heaters with a maximum heat input rate of 0.15 million British thermal units per hour, each, exhausting through stacks SV-8, 9, 10, and 12;
- (h) miscellaneous cutting and sanding operations for fiberglass and wood consisting of hand sanders, hand cutters, hand grinders and a chop saw;
- (i) two (2) variable vapor space liquid storage tanks identified as SV-21 and SV-22 holding polyester and resin, respectively.
- (j) one (1) existing natural gas fired furnace with a maximum heat input rate of 0.464 million British thermal units per hour exhausting through stack SV-19 located in Building 1.

### Stack Summary

Stack ID	Operation	Height (feet)	Diameter (feet)	Flow Rate (acfm)	Temperature (°F)
SV-1, 2 (each)	chop booth	32	2	5490	ambient
SV-3	radiant tube heater	30	0.3	100	77
SV-4	gel coat booth	32	2	5490	ambient
SV-5	radiant tube heater	30	0.3	100	77
SV-6	radiant tube heater	30	0.3	100	77
SV-7	cut & grind booth	6	2	5490	ambient
SV-8	radiant tube heater	30	0.3	100	77
SV-9	radiant tube heater	30	0.3	100	77
SV-10	radiant tube heater	30	0.3	100	77
SV-11	mix area	32	1.5	1190	ambient
SV-12	radiant tube heater	30	0.3	100	77
SV-13	radiant tube heater	30	0.3	100	77
SV-14, 15 (each)	large paint booth	32	2.8	12000	ambient
SV-16	mold shop booth	32	2	5490	ambient
SV-17	mold shop booth	32	2	5490	ambient
SV-18	mold shop booth	32	2	5490	ambient
SV-19	furnace (Bldg. 1)	30	0.3	100	77
SV-20	cure oven	32	1	990	77
SV-21	polyester storage tank	10	NA	NA	ambient
SV-22	resin storage tank	10	NA	NA	ambient

### Enforcement Issue

The natural gas fired (0.464 MMBtu/hr) furnace is an existing combustion unit located in Building 1. The furnace was not included during a review of existing Building 1 facilities which resulted in a permit (CP 039-4510) being issued for this source. Based on potential emission estimates, this furnace would not have changed the level of approval required for CP039-4510 had it been included, and in and of itself this unit has allowable emissions below exempt levels. Therefore, this existing facility will not be considered to be constructed without a permit (CWOP) or operated without a permit (OWOP).

### Recommendation

The staff recommends to the Commissioner that the construction and operation be approved. This recommendation is based on the following facts and conditions:

Information, unless otherwise stated, used in this review was derived from the application and additional information submitted by the applicant.

An application for the purposes of this review was received on December 23, 1997, with additional information received on January 30 and February 12, 1998.

### Emissions Calculations

See Appendix A (Emissions Calculation Spreadsheets) for detailed calculations (6 pages).

### Total Potential and Allowable Emissions

Indiana Permit Allowable Emissions Definition (after compliance with applicable rules, based on 8,760 hours of operation per year at rated capacity):

Pollutant	Allowable Emissions (tons/year)	Potential Emissions (tons/year)
Particulate Matter (PM)	143.8	143.8
Particulate Matter (PM10)	143.8	143.8
Sulfur Dioxide (SO <sub>2</sub> )	negligible	negligible
Volatile Organic Compounds (VOC)	199.5	199.5
Carbon Monoxide (CO)	0.9	0.9
Nitrogen Oxides (NO <sub>x</sub> )	3.7	3.7
Single Hazardous Air Pollutant (HAP)	94.0	94.0
Combination of HAPs	142.2	142.2

- (a) The potential emissions before control are the same as the allowable emissions, therefore, the allowable emissions are used for the permitting determination.
- (b) Allowable emissions (as defined in the Indiana Rule) of particulate matter (PM) and volatile organic compounds (VOC) are greater than 25 tons per year. Therefore, pursuant to 326 IAC 2-1, Sections 1 and 3, a construction permit is required.
- (c) Allowable emissions (as defined in the Indiana Rule) of a single hazardous air pollutant (HAP) are greater than 10 tons per year and the allowable emissions of any combination of the HAPs are greater than 25 tons per year. Therefore, pursuant to 326 IAC 2-1, a construction permit is required.

### County Attainment Status

- (a) Volatile organic compounds (VOC) and oxides of nitrogen (NO<sub>x</sub>) are precursors for the formation of ozone. Therefore, VOC emissions are considered when evaluating the rule applicability relating to the ozone standards. 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 and 40 CFR 52.21.
- (b) Elkhart County has been classified as attainment or unclassifiable for all other regulated air pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.

(c) Fugitive Emissions

Since this type of operation is not one of the 28 listed source categories under 326 IAC 2-2 and since there are no applicable New Source Performance Standards that were in effect on August 7, 1980, the fugitive PM emissions are not counted toward determination of PSD and Emission Offset applicability.

**Source Status**

Existing Source PSD, Part 70 or FESOP Definition (emissions after controls, based on 8,760 hours of operation per year at rated capacity and/ or as otherwise limited):

Pollutant	Emissions (ton/yr)
PM	1.7
PM10	1.7
SO <sub>2</sub>	negligible
VOC	144.8
CO	1.0
NO <sub>x</sub>	3.9

- (a) This existing source is **not** a major stationary source because no attainment regulated pollutant is emitted at a rate of 250 tons per year or more, and it is not in one of the 28 listed source categories.
- (b) These emissions were based on the construction permit, CP 039-4510, issued October 11, 1995.

**Proposed Modification**

PTE from the proposed modification (based on 8,760 hours of operation per year at rated capacity including enforceable emission control and production limit, where applicable):

Pollutant	PM (ton/yr)	PM10 (ton/yr)	SO <sub>2</sub> (ton/yr)	VOC (ton/yr)	CO (ton/yr)	NO <sub>x</sub> (ton/yr)
Proposed Modification	17.4	17.4	negligible	199.5	0.9	3.7
PSD Threshold Level	250	250	250	250	250	250

This modification to an existing minor stationary source is not major because the emission increase is less than the PSD significant levels. Therefore, pursuant to 326 IAC 2-2, and 40 CFR 52.21, the PSD requirements do not apply.

## Part 70 Permit Determination

### 326 IAC 2-7 (Part 70 Permit Program)

This existing source has submitted their Part 70 (T037-7354-00137) application on December 4, 1996. The equipment being reviewed under this permit shall be incorporated in the submitted Part 70 application.

## Federal Rule Applicability

- (a) There are no New Source Performance Standards (326 IAC 12), 40 CFR Part 60, applicable to these facilities.
- (b) There are no National Emissions Standards for Hazardous Air Pollutants, 40 CFR Part 63, applicable to these facilities.

## State Rule Applicability

### 326 IAC 2-1-3.4 (New Source Toxics Control)

This new truck cap production line, which is considered a "process or production unit" as defined in 40 CFR 63.41 (incorporated by reference in 326 IAC 2-1-3.4), is subject to 326 IAC 2-1-3.4 (New Source Toxics Control) because the potential to emit (PTE) of combined hazardous air pollutants (HAPs) is greater than 25 tons per year and the potential to emit (PTE) of a single HAP is greater than 10 tons per year (see Appendix A of the TSD for detailed calculations).

Pursuant to 326 IAC 2-1-3.4, a MACT (Maximum Achievable Control Technology) analysis has been submitted to the Office of Air Management (OAM). The MACT determination shall consist of the application methods and work practices resulting from the best available control technology (BACT) study discussed below under 326 IAC 8-1-6.

### 326 IAC 2-6 (Emission Reporting)

This facility is subject to 326 IAC 2-6 (Emission Reporting), because the source emits more than 10 tons per year of VOC. Pursuant to this rule, the owner/operator of this facility must annually submit an emission statement of the facility. The annual statement must be received by April 15 of each year and must contain the minimum requirements as specified in 326 IAC 2-6-4.

### 326 IAC 5-1-2 (Visible Emission Limitations)

Except as provided in 326 IAC 5-1-3 (Temporary Exemptions), the visible emissions shall meet the following:

- a) Visible emissions shall not exceed an average of 40% opacity in 24 consecutive readings.
- b) visible emissions shall not exceed 60% opacity for more than a cumulative total of 15 minutes (60 readings) in a 6-hour period.

### 326 IAC 6-3-2 (Particulate Emissions Limitations for Process Operations)

No person shall operate a facility such that particulate matter is emitted in excess of the pound per hour limit calculated as follows according to part (c) of the rule:



- (c) *Catalytic Thermal Oxidizer* - A catalytic thermal oxidizer will provide an overall reduction in VOCs of 95%. Based on potential VOC emissions from the facilities of 199.5 tons per year, this control technology would control 189.5 tons of VOC per year. Additional energy in the form of natural gas would be required to maintain the temperature necessary for destruction of the VOCs, and additional electricity would be required to run the control devices. Natural gas combustion in this 45.7 MMBtu/hr unit would create a contemporaneous nitrogen oxide emissions increase of 28.0 tons per year, potentially.
- (d) *Recuperative Thermal Oxidizer* - A recuperative thermal oxidizer will provide and overall reduction in VOCs of 95%. Based on potential VOC emissions from the facilities of 199.5 tons per year, this control technology would control 189.5 tons of VOC per year. Additional energy in the form of natural gas would be required to maintain the temperature necessary for destruction of the VOCs, and additional electricity would be required to run the control devices. Natural gas combustion in this 24.9 MMBtu/hr unit would create a contemporaneous nitrogen oxide emissions increase of 15.3 tons per year, potentially.

Utilizing the operating parameters, emission profiles and flowrates as a preliminary design basis, capital and annualized costs for each of the feasible control technologies (zeolite rotary concentrator and recuperative oxidizer, catalytic thermal oxidizer, and recuperative thermal oxidizer) were prepared. These three options were then compared to a fourth option, the operation of the plant without add-on controls to arrive at a determination of BACT for the VOC emissions from the proposed facility. Relative cost (dollars per ton of VOC removed) of the technologies compared to the option of no add-on controls along with initial capital costs of the installed equipment are presented in the following table:

Control Technology	Relative Cost (\$/ton VOC removed)	Capital Cost (\$)
zeolite rotary concentrator/recuperative oxidizer	\$3,344	\$1,219,200
catalytic thermal oxidizer	\$12,031	\$1,552,000
recuperative thermal oxidizer	\$11,958	\$1,321,600

On the basis of cost effectiveness, the zeolite rotary concentrator with recuperative oxidizer would appear to represent the technology of choice. However, the cost effectiveness of this technology is still excessively high, and the capital costs of the add-on controls are considered to be prohibitively expensive. Specifically, the net annual control cost would increase the company's net annual operating cost 88.7% and the company had a negative net annual profit in 1996 (the latest financial statement available).

Based on Covermaster's analysis, the Best Available Control Technology (BACT) for the process is High Volume Low Pressure (HVLP) spray guns.

- (2) On February 3, 1998, the OAM investigated existing BACT determinations made in the last five years for similar sources utilizing the EPA RBLC (RACT/BACT/LAER Clearinghouse). No existing BACT determinations were found in this search based on the SIC code (3799) and the pollutant emitted (VOC). Additional searches for applied control technologies for fiberglass lay up operations and manual spray coating operations separately did not produce any cases where add-on controls were determined to be feasible or were being implemented.

Based on evaluation of the BACT review submitted by Covermaster, Inc., the OAM agrees with the determinations made with the addition of the following work practices and VOC emissions limitation to the use of HVLP spray guns:

- (a) spray applicators shall be cleaned with acetone;
- (b) the cleanup solvent containers used to transport solvent from drums to work stations shall be closed containers having soft gasketed spring-loaded closures;
- (c) cleanup rags saturated with solvent shall be stored, transported, and disposed of in containers that are closed tightly;
- (d) the spray guns used shall be the type that can be cleaned without the need for spraying the solvent into the air;
- (e) the overspray shall be minimized by spraying as close as practicable into the molds;
- (f) the application equipment operators shall be instructed and trained on the methods and practices utilized to minimize the overspray emitted on the floor and into the air filters.
- (g) the parts shall be placed underneath infrared lights to decrease the gelation time as required by ambient temperature conditions;
- (h) all solvent sprayed during clean-up or color changes shall be directed into containers (such containers shall be closed as soon as solvent spraying is complete) and the waste solvent shall be disposed of in such a manner that evaporation is minimized; and
- (i) storage containers used to store VOC and /or HAPs containing materials shall be kept covered when not in use.
- (j) these facilities shall use no more than 95.3 tons of VOC per twelve (12) consecutive month period. This usage limit is required as a component of the BACT determination and compliance with this limit shall be determined based on the following criteria:
  - (1) VOC usage for the gel coats delivered to the applicator shall be determined by multiplying the gel coat usage times the VOC content (percent by weight) and a 52.1 percent flash off factor,

- (2) VOC usage for the resins delivered to the applicator shall be determined by multiplying the resin usage times the VOC content (percent by weight) and a 25.9 percent flash off factor, and
  - (3) VOC usage for all other coatings delivered to the applicator and all solvents used shall be determined by multiplying the coating or solvent usage times the VOC content (percent by weight).
- (3) Addition of a similar production or paint line in the future shall require re-evaluation of this BACT determination based on control of emissions from this process and the new one.

**Air Toxic Emissions**

Indiana presently requests applicants to provide information on emissions of the 187 hazardous air pollutants set out in the Clean Air Act Amendments of 1990. These pollutants are either carcinogenic or otherwise considered toxic and are commonly used by industries. They are listed as air toxics on the Office of Air Management (OAM) Construction Permit Application Form Y.

- (a) This proposed truck cap production line will emit levels of air toxics greater than those that constitute major source applicability according to Section 112 of the Clean Air Act. The concentrations of these air toxics were modeled and found to be (in worst case possible) as follows:

Air Toxic Emissions

Pollutant	Rate (lb/hr)	Rate @ 8760 hr/yr (ton/yr)	Modeled Concentration (Fg/m <sup>3</sup> )	OSHA PEL (Fg/m <sup>3</sup> )	% OSHA PEL
MEK	1.31	5.72	11.45	590000	0.0019
MIBK	0.79	3.46	6.95	410000	0.0017
Toluene	2.81	12.32	42.9	750000	0.0057
Xylene	2.59	11.36	22.8	435000	0.0052
Glycol Ethers	0.09	0.39	0.8	-	-
Methanol	0.05	0.24	0.5	260000	0.0002
Styrene	21.47	94.04	648.4	420000	0.1544
Dimethyl Phthalate	3.35	14.67	101.5	5000	2.0300
<b>TOTAL</b>	-	142.20			

Methodology:  
 Rate ton/yr = (rate lb/hr)\*(hr/yr of operation)

Air Toxic Stacks

Stack ID	Height (feet)	Diameter (feet)	Flow Rate (acfm)	Temperature (°F)
SV-1, 2 (each)	32	2	5490	ambient
SV-4	32	2	5490	ambient
SV-16, 17 & 18 (each)	32	2	5490	ambient

The concentrations of these air toxics were compared to the Permissible Exposure Limits (PEL) developed by the Occupational Safety and Health Administration (OSHA). The Office of Air Management (OAM) does not have at this time any specific statutory or regulatory authority over these substances.

- (b) See attached spreadsheets for detailed air toxic calculations.

**Conclusion**

The construction of this truck cap production line to be located in Building 2 will be subject to the conditions of the attached proposed **Construction Permit No. CP-039-9337-00137**.

## Indiana Department of Environmental Management Office of Air Management

### Addendum to the Technical Support Document for New Construction and Operation

Source Name: Covermaster, Inc.  
 Source Location: 57784 C.R. 3, Elkhart, Indiana, 46517  
 County: Elkhart  
 Construction Permit No.: CP-039-9337-00137  
 SIC Code: 3799  
 Permit Reviewer: Janusz Johnson

On April 1, 1998, the Office of Air Management (OAM) had a notice published in the *Elkhart Truth*, Elkhart, Indiana, stating that Covermaster, Inc., had applied for a construction permit to construct and operate a fiberglass truck cap production line with control. The notice also stated that OAM proposed to issue a permit for this installation and provided information on how the public could review the proposed permit and other documentation. Finally, the notice informed interested parties that there was a period of thirty (30) days to provide comments on whether or not this permit should be issued as proposed.

On May 19, 1998, the OAM determined that the following typographical corrections needed to be made to the proposed permit (bold emphasis added to new language):

1. The description of the air make-up units in Item (e) of Section A.2 on Page 4 of the Permit has been changed as follows:
  - (e) two ~~(1)~~ **(2)** air make-up units fired by natural gas with maximum heat input rates of 2.97 and 2.00 million British thermal units per hour, respectively, exhausting through stacks AM-1 and AM-2, respectively;
  
2. Likewise, the description of the air make-up units in Item (e) of Section D.1 on Page 15 of the Permit has been changed as follows:
  - (e) two ~~(1)~~ **(2)** air make-up units fired by natural gas with maximum heat input rates of 2.97 and 2.00 million British thermal units per hour, respectively, exhausting through stacks AM-1 and AM-2, respectively;
  
3. Condition C.5 on Page 8 of the Permit has been changed to remove the following language:
 

C.5 Availability of Permit [326 IAC 2-1-3(l)]  
 Pursuant to 326 IAC 2-1-3(l), the Permittee shall maintain the applicable permit on the premises of this source and shall make this permit available for inspection by the IDEM, ~~(local agency if applicable)~~ or other public official having jurisdiction.
  
4. Condition D.1.1 on Page 15 and Conditions D.1.4 and D.1.5 on Page 18 of the Permit contain redundant requirements for monitoring the performance of the spray booth controls. To correct this redundancy, Condition D.1.1 shall be changed to remove Items (a), (c), (d), and (e) as follows:

D.1.1 Particulate Matter (PM) [326 IAC 6-3-2(c)]

Pursuant to 326 IAC 6-3 (Process Operations):

~~(a) The dry filters for particulate matter overspray control shall be in operation at all times when the paint booth and the truck cap resin spray booth are in operation.~~

~~(b)~~(a) The gel coat, resin and paint spray booths shall comply with 326 IAC 6-3-2(c) using the following equation:

$$E = 4.10P^{0.67} \quad \text{where: } E = \text{rate of emission in pounds per hour,}$$

P = process weight in tons per hour, if  
P is equal to or less than 60,000 lbs/hr (30 tons/hr)

or

$$E = 55.0P^{0.11} - 40 \quad \text{where: } E = \text{rate of emission in pounds per hour,}$$

P = process weight in tons per hour, if  
P is greater than 60,000 lbs/hr (30 tons/hr).

~~(c) Daily inspections shall be performed to verify the placement, integrity and particulate loading of the filters for the paint booth and truck cap resin spray booth.~~

~~(d) Weekly inspections shall be performed of the coating emissions from the stacks and the presence of overspray on the rooftops and the nearby ground. A trained employee shall record whether emissions are normal or abnormal. For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time. A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.~~

~~(e) Additional inspections and preventive measures shall be performed as prescribed in the Preventive Maintenance Plan.~~

Condition D.1.4 (renumbered D.1.5) shall remain unchanged, and Condition D.1.5 (renumbered D.1.6) shall be reworded as follows to be consistent with the latest monitoring language:

D.1.6 Monitoring

(a) Daily inspections shall be performed to verify the placement, integrity and particle loading of the filters. To monitor the performance of the dry filters, daily observations shall be made of the overspray **from the surface coating booth stacks** while one or more of the booths are in operation. The Compliance Response Plan shall be followed whenever a condition exists which should result in a response step. Failure to take response steps in accordance with Section C - Compliance Monitoring Plan - Failure to Take Response Steps, shall be considered a violation of this permit.

- (b) Weekly inspections shall be performed of the coating emissions from the stack and the presence of overspray on the rooftops and the nearby ground. The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when ~~an overspray emission, evidence of overspray emission, or other abnormal emission~~ **a noticeable change in overspray emission, or evidence of overspray emission** is observed. The Compliance Response Plan shall be followed whenever a condition exists which should result in a response step. Failure to take response steps in accordance with Section C - Compliance Monitoring Plan - Failure to Take Response Steps, shall be considered a violation of this permit.
- (c) Additional inspections and preventive measures shall be performed as prescribed in the Preventive Maintenance Plan.

On April 20, 1998, Covermaster, Inc., submitted comments on the proposed construction permit.

The summary of the comments and corresponding responses is as follows (changes are bolded for emphasis):

- Comment 1: Permit Condition D.1.2 (b)(7) states "the parts shall be placed underneath infrared lights to decrease the gelation time as required by ambient temperature conditions". This type of light and the regulated area this light would be in would be an OSHA (Occupational Safety and Health Administration) violation. All equipment must be explosion proof. Also the infrared lights would have to be very close to the part. This could set off an explosion because of the volatile vapors coming off of the fiberglass parts we produce. Please give this further consideration before this permit condition becomes part of our permit.
- Response 1: Because the conditions of the new MACT determination made pursuant to 326 IAC 2-1-3.4 (as discussed below) will obtain the required degree of emissions control, it has been deemed unnecessary to further require infrared lights to decrease the gelation time. The new MACT determination is described and discussed elsewhere in this addendum. This finding aside, IDEM, OAM, does not believe that use of infrared lights would necessarily result in a OSHA violation. Explosion proof equipment is required in areas in which the concentration of combustible components in the air is greater than 25% of the lower explosive limit (LEL). The work area design and fresh air inflow rates can be changed, generally, to avoid this type of situation. IDEM, OAM reserves the authority to require infrared lights to decrease the gelation time as a condition of BACT or MACT for this type of operation where it is deemed necessary or appropriate.

On April 24, 1998, the OAM determined that the analysis of maximum achievable control technology (MACT) submitted by Covermaster, Inc., was inadequate. A request was made for further research and submittal of another analysis of appropriate MACTs. On June 22, 1998, Covermaster submitted a new MACT analysis. Based on this submittal, and determinations made by the OAM on minimum acceptable MACT requirements, the following changes have been made to the permit:

1. A new condition has been added to Section D.1 as Condition D.1.2 to better clarify the relationship between BACT and MACT determinations. This new condition shall read as follows, and subsequent conditions of Section D.1 shall be renumbered as appropriate:

**D.1.2 Volatile Organic Compounds (VOC) [326 IAC 8-1-6]**

- (a) Pursuant to 326 IAC 8-1-6, the new large paint booth, mold production booths, chop booth, and gel coat booth are subject to the requirements of 326 IAC 8-1-6, which requires that the Best Available Control Technology (BACT) be used to control VOC emissions.
- (b) The potential to emit (PTE) VOC from these facilities shall be less than 95.3 tons per twelve (12) consecutive month period. For the purpose of determining compliance with this limit, each ton of volatile organic HAP emitted from resins and gel coats applied, as determined by the criteria set forth in D.1.3(a)(1) and (2), shall be considered a ton of VOC.
- (c) This limit on the potential to emit (PTE) VOC is required as a component of the BACT determination and, in addition to the requirements of 326 IAC 2-1-3.4 (New Source Toxics Control) specified in Condition D.1.3, shall satisfy the BACT requirements for this new source.

2. Condition D.1.2 (Volatile Organic Compounds (VOC) and Hazardous Air Pollutants (HAP)) of the proposed draft permit shall be replaced with the new MACT language below and renumbered D.1.3:

**D.1.3 New Source Toxics Control [26 IAC 2-1-3.4]**

Pursuant to the MACT determination under 326 IAC 2-1-3.4, operating conditions for the new large paint booth, mold production booths, chop booth, and gel coat booth shall be the following:

- (a) Use of resins and gel coats shall be limited such that the potential to emit (PTE) volatile organic HAP from resins and gel coats only shall be less than 95.3 tons per twelve (12) consecutive month period. Compliance with this limit shall be determined based upon the following criteria:
  - (1) Monthly usage by weight, monomer content, method of application, and other emission reduction techniques for each gel coat and resin shall be recorded. Volatile organic HAP emissions shall be calculated by multiplying the usage of each gel coat and resin by the emission factor that is appropriate for the monomer content, method of application, and other emission reduction techniques for each gel coat and resin, and summing the emissions for all gel coats and resins. Emission factors shall be obtained from the reference approved by IDEM, OAM.

**(2) Until such time that new emissions information is made available by U.S. EPA in its AP-42 document or other U.S. EPA-approved form, emission factors shall be taken from the following reference approved by IDEM, OAM: "CFA Emission Models for the Reinforced Plastics Industries", Composites Fabricators Association, February 28, 1998, and shall not exceed 32.3% styrene emitted per weight of gel coat applied and 17.7% styrene emitted per weight of resin applied. For the purposes of these emission calculations, monomer in resins and gel coats that is not styrene shall be considered as styrene on an equivalent weight basis.**

**(b) Resins and gel coats used, including filled resins and tooling resins and gel coats, shall be limited to a maximum of 35 percent (35%) by weight for resins, 37 percent (37%) by weight for gel coats or their equivalent on an emissions mass basis. Monomer contents shall be calculated on a neat basis, i.e., excluding any filler. Compliance with these monomer content limits shall be demonstrated on a monthly basis.**

**The use of resins with monomer contents lower than 35%, gel coats with monomer contents lower than 37%, and/or additional emission reduction techniques approved by IDEM, OAM, may be used to offset the use of resins with monomer contents higher than 35%, and/or gel coats with monomer contents higher than 37%. This is allowed to meet the monomer content limits for resins and gel coats, and shall be calculated on an equivalent emissions mass basis as shown below:**

**(Emissions from >35% resin or >37% gel coat) - (Emissions from 35% resin or 37% gel coat) # (Emissions from 35% resin or 37% gel coat) - (Emissions from <35% resin, <37% gel coat, and/or other emission reduction techniques).**

**Where: Emissions, lb or ton = M (mass of resin or gel coat used, lb or ton) \* EF (Monomer emission factor for resin or gel coat used, %);**

**EF, Monomer emission factor = emission factor, expressed as % styrene emitted per weight of resin applied, which is indicated by the monomer content, method of application, and other emission reduction techniques for each gel coat and resin used.**

**(c) Flow coaters, a type of non-spray application technology of a design and specifications to be approved by IDEM, OAM, shall be used in the following manner:**

**(1) to apply 50% of all neat resins within 6 months of commencement of operation.**

- (2) to apply 100% of all neat resins used within 1 year of commencement of operation.**

**If after 1 year of operation it is not possible to apply a portion of neat resins with flow coaters, equivalent emissions reductions must be obtained via use of other techniques elsewhere in the process. Examples of other techniques include, but are not limited to, lower monomer content resins and gel coats, closed molding, vapor suppression, or installing a control device with an overall reduction efficiency of 95%.**

- (d) Optimized spray techniques according to a manner approved by IDEM shall be used for coatings, gel coats and filled resins (where fillers are required for corrosion or fire retardant purposes) at all times. Optimized spray techniques include, but are not limited to, the use of airless, air-assisted airless, high volume low pressure (HVLP), or other spray applicators demonstrated to the satisfaction of IDEM, OAM, to be equivalent to the spray applicators listed above.**

**HVLP spray is the technology used to apply material to substrate by means of application equipment that operates between one-tenth (0.1) and ten (10) pounds per square inch gauge (psig) air pressure measured dynamically at the center of the air cap and at the air horns of the spray system.**

- (e) The listed work practices shall be followed:**
- (1) To the extent possible, a non-VOC, non-HAP solvent shall be used for cleanup.**
  - (2) Cleanup solvent containers shall be used to transport solvent from drums to work.**
  - (3) Clean up stations shall be closed containers having soft gasketed spring-loaded closures and shall be kept completely closed when not in use.**
  - (4) Cleanup rags saturated with solvent shall be stored, transported, and disposed of in containers that are closed tightly.**
  - (5) The spray guns used shall be the type that can be cleaned without the need for spraying the solvent into the air.**
  - (6) All solvent sprayed during cleanup or resin changes shall be directed into containers. Such containers shall be closed as soon as solvent spraying is complete and the waste solvent shall be disposed of in such a manner that evaporation is minimized.**

**(7) Storage containers used to store VOC- and/or HAP-containing materials shall be kept covered when not in use.**

3. The record keeping and reporting requirements of this permit have been changed to coincide with the new MACT language. As a result of this change, Condition D.1.6 (renumbered D.1.7) was replaced with the following two conditions:

**D.1.7 Record Keeping Requirements**

**(a) To document compliance with Conditions D.1.2 and D.1.3, the Permittee shall maintain records in accordance with (1) through (5) below. Records maintained for (1) through (5) shall be taken monthly and shall be complete and sufficient to establish compliance with the volatile organic compounds (VOC) and volatile organic HAP emission limits established.**

**(1) The usage by weight and monomer content of each resin and gel coat, and the usage by weight and VOC content of all other coatings. Records shall include purchase orders, invoices, and material safety data sheets (MSDS) necessary to verify the type and amount used.**

**(2) A log of the dates of use;**

**(3) Method of application and other emission reduction techniques for each resin and gel coat used;**

**(4) The calculated total volatile organic HAP emissions from resin and gel coat used for each month.**

**(5) The calculated total volatile organic compound (VOC) emissions from all coatings, including resin and gel coat, used for each month.**

**(b) To document compliance with Condition D.1.6, the Permittee shall maintain a log of daily overspray observations, daily and weekly inspections, and those additional inspections prescribed by the Preventive Maintenance Plan.**

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

**D.1.8 Reporting Requirements**

**A quarterly summary of the information to document compliance with Condition D.1.2 shall be submitted to the addresses listed in Section C - General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported.**

Mail to: Permit Administration & Development Section  
Office Of Air Management  
100 North Senate Avenue  
P. O. Box 6015  
Indianapolis, Indiana 46206-6015

Covermaster, Inc.  
57784 C.R. 3  
Elkhart, Indiana 46517

**Affidavit of Construction**

I, \_\_\_\_\_, being duly sworn upon my oath, depose and say:  
(Name of the Authorized Representative)

1. I live in \_\_\_\_\_ County, Indiana and being of sound mind and over twenty-one (21) years of age, I am competent to give this affidavit.
2. I hold the position of \_\_\_\_\_ for \_\_\_\_\_.  
(Title) (Company Name)
3. By virtue of my position with \_\_\_\_\_, I have personal  
(Company Name)  
knowledge of the representations contained in this affidavit and am authorized to make these representations on behalf of \_\_\_\_\_.  
(Company Name)
4. I hereby certify that Covermaster, Inc., 57784 C.R. 3, Elkhart, Indiana, 46517, has constructed the truck cap production line in conformity with the requirements and intent of the construction permit application received by the Office of Air Management on December 23, 1997, and as permitted pursuant to **Construction Permit No. CP-039-9337, Plant ID No. 039-00137** issued on \_\_\_\_\_

Further Affiant said not.

I affirm under penalties of perjury that the representations contained in this affidavit are true, to the best of my information and belief.

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

STATE OF INDIANA)  
)SS

COUNTY OF \_\_\_\_\_ )

Subscribed and sworn to me, a notary public in and for \_\_\_\_\_ County and State of Indiana on this \_\_\_\_\_ day of \_\_\_\_\_, 19 \_\_\_\_\_.

My Commission expires: \_\_\_\_\_

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Name (typed or printed)

**Appendix A: Emissions Calculations  
Reinforced Plastics and Composites  
Non Vapor Supressed (NVS) Fiberglass Processes**

**Company Name: Covermaster, Inc.**  
**Address City IN Zip: 57784 C.R. 3, Elkhart, IN**  
**CP: 039-9337**  
**Pit ID: 039-00137**  
**Reviewer: Janusz Johnson**  
**Date: February 13, 1998**

### Flash Off Factor Determination

Application Type	thickness of part (inches)	styrene content (wt. %)	gel time (minutes)	resin flow rate (lbs/min)	gel coat flow rate (lbs/min)	air flow velocity (ft/min)	standard deviation "Std"	calculated flash-off (%)	minimum flash-off (%)	flash off factor (%)
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#### Molds

Resin Non-Spray Layup (ns)				---	---		<b>1.07</b>	<b>ERR</b>	<b>15.40%</b>	<b>ERR</b>
Resin Spray Layup (s)	0.031	40.00%	18.00	20.00	---	75.00	<b>1.28</b>	<b>-9.99%</b>	<b>25.90%</b>	<b>25.90%</b>
Gel Coat (gc)	0.031	25.00%	20.00	---	3.00	75.00	<b>1.13</b>	<b>13.02%</b>	<b>52.10%</b>	<b>52.10%</b>

#### Truck Caps

Resin Non-Spray Layup (ns)				---	---		<b>1.07</b>	<b>ERR</b>	<b>15.40%</b>	<b>ERR</b>
Resin Spray Layup (s)	0.031	39.20%	18.00	20.00	---	100.00	<b>1.28</b>	<b>-12.11%</b>	<b>25.90%</b>	<b>25.90%</b>
Gel Coat (gc)	0.031	38.00%	16.00	---	3.00	100.00	<b>1.13</b>	<b>42.55%</b>	<b>52.10%</b>	<b>52.10%</b>

#### METHODOLOGY

TH = thickness of part in inches

GCF = gel coat flow rate in pounds per minute

SC = weight percent styrene content

AF = air flow velocity in feet per minute

GT = gel time in minutes

Std = standard deviation (ns=1.07, s=1.28, gc=1.13)

RF = resin flow rate in pounds per minute

calculated % flash off for Resin (ns) =  $(-0.46365 * TH + 0.00265 * SC + 0.00068 * GT + 3E-05 * AF - 0.032) * Std / SC\%$

calculated % flash off for Resin (s) =  $(-0.19881 * TH + 0.00827 * SC + 0.00038 * GT - 0.00854 * RF + 3E-05 * AF - 0.1941) * Std / SC\%$

calculated % flash off for Gel Coat (gc) =  $(-5.34119 * TH + 0.00897 * SC + 0.00083 * GT - 0.00018 * GCF + 4E-05 * AF - 0.0476) * Std / SC\%$

flash off factor (%) = calculated % flash off or minimum flash off, whichever is greater

**Appendix A: Existing Source  
Natural Gas Combustion Only  
Commercial Boiler (mm Btu/hr 0.3 - < 10)**

**Company Name:** Covermaster, Inc.  
**City, Indiana:** Elkhart, Indiana  
**Reviewer:** Janusz Johnson  
**Date:** January 29,1998

**CP#:** 039-9337  
**Plt ID:** 039-00137

Heat Input Capacity  
MMBtu/hr

Potential Throughput  
MMCF/yr

7.4 furnace SV-19 @ 0.464 MMBtu/hr  
curing oven SV-20 @ 2.0 MMBtu/hr  
air make up units AM-1 & AM-2 @ 2.97 MMBtu/hr & 2.0 MMBtu/hr, respectively

65.1

Pollutant

	PM	PM10	SO2	NOx	VOC	CO
Emission Factor in lb/MMCF **	11.9	11.9	0.6	100.0	5.3	21.0
Potential Emission in tons/yr	0.4	0.4	0.0	3.3	0.2	0.7

	Uncontrolled	Low NOx Burn	Flue Recirculation
**Emission Factor for NOx:	100	17	36
**Emission Factor for CO:	21	27	No Data

**Methodology**

MMBtu = 1,000,000 Btu

MMCF = 1,000,000 Cubic Feet of Gas

Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MMBtu

Emission Factors from AP42 1.4 - Natural Gas Combustion ( EPA 450/4-90-003 SCC #1-03-006-03)

Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

**Appendix A: Emission Calculations  
Natural Gas Combustion Only  
Residential Boiler (mm Btu/hr < 0.3)**

**Company Name:** Covermaster, Inc.  
**City, Indiana:** Elkhart, Indiana  
**Reviewer:** Janusz Johnson  
**Date:** January 29,1998

**CP#:** 039-9337  
**Plt ID:** 039-00137

Heat Input Capacity MMBtu/hr	Potential Throughput MMCF/yr
radiant tube heaters SV-3,5,6, 13 @ 0.1 MMBtu/hr, each	
1.0 Lare radiant tube heaters SV-8,9,10,12 @ 0.15, each	8.3

		Pollutant					
Emission Factor in lb/MMCF	**	PM	PM10	SO2	NOx	VOC	CO
		11.2	11.2	0.6	94.0	5.3	40.0
Potential Emission in tons/yr		0.0	0.0	0.0	0.4	0.0	0.2

**Methodology**

MMBtu = 1,000,000 Btu

MMCF = 1,000,000 Cubic Feet of Gas

Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,050 MMBtu

Emission Factors from AP42 1.4 - Natural Gas Combustion ( EPA 450/4-90-003 SCC #1-03-006-03)

Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

**Appendix A**  
**Process steps emitting Particulate Matter**

**Company Name:** Covermaster, Inc.  
**City, Indiana:** Elkhart, Indiana  
**Reviewer:** Janusz Johnson  
**Date:** January 29,1998

**CP#:** 039-9337  
**Plt ID:** 039-00137

**Grinding and Sanding Emissions**

This new operation has fugitive emissions from cutting and sanding operations and non- fugitive emissions from a cutting and grinding booth (SV-7). These operations include hand sanders, hand cutters, small hand grinders, and a 12" chop saw.

It will be assumed for the purposes of this permit review that a conservative emission estimate of 1 lb/ton will be representative of all grinding, cutting, and sanding operations related to the production of truck caps by the new facilities under review. Therefore, based on a maximum production rate of 730 pounds per hour:

potential emissions (lb/hr) = 1 lb/ton \* 730 lb/hr \* 1 ton/2000 lb = 0.365 lb/hr  
@8760 hours per year and 2000 pounds per ton, potential emissions 1.5987 ton/yr

Appendix A: Emissions Calculations  
VOC and Particulate

Company Name: Covermaster, Inc. CP#: 039-9337  
City, Indiana: Elkhart, Indiana Plt ID: 039-00137  
Reviewer: Janusz Johnson  
Date: January 29,1998

Material	Density (Lb/Gal)	Weight % Volatile (H2O& Organics)	Weight % Water	Weight % Organics	Volume % Water	Volume % Non-Vol (solids)	Gal of Mat (gal/unit)	Maximum (unit/hour)	Pounds VOC per gallon of coating less water	Pounds VOC per gallon of coating	Potential VOC pounds per hour *	Potential VOC pounds per day *	Potential VOC tons per year *	Particulate Potential ton/yr	lb VOC /gal solids	Transfer Efficiency	PM Control Efficiency	Controlled Potential Particulate ton/yr
<b>One (1) Large Paint Booth (SV-14 &amp; 15)</b>																		
<i>Solvent/Cleaners</i>																		
thinner	6.80	100.0%	0.0%	100.0%	0.0%	0.00%	0.01000	8.125	6.80	6.80	0.55	13.26	2.42	0.00	ERR			0.00
<i>Paint</i>																		
7600S	7.88	63.90%	0.0%	63.9%	0.0%	38.00%	0.16200	8.125	5.04	5.04	6.63	159.07	29.03	4.10	13.99	75%	98%	0.08
7020G	7.78	66.10%	0.0%	66.1%	0.0%	33.80%	0.13980	8.125	5.14	5.14	5.84	140.10	25.57	3.28	15.20	75%	98%	0.07
7185S	7.74	76.80%	0.0%	76.8%	0.0%	16.90%	0.23400	8.125	5.94	5.94	11.29	271.06	49.47	3.74	35.15	75%	98%	0.07
580S	8.26	61.90%	0.0%	61.9%	0.0%	38.00%	0.36000	8.125	5.11	5.11	14.96	358.93	65.50	10.08	13.46	75%	98%	0.20
<b>Three (3) Mold Shop Booths (SV-16, 17, 18) and Repair area</b>																		
<i>Gelcoat/Resin/Catalyst</i>																		
resin/MR1302	9.17	40.00%	0.0%	40.0%	0.0%	59.00%	5.16000	0.015	3.67	3.67	0.07	1.76	0.32	0.47	6.22	75%		0.47
catalyst 702	9.00	88.00%	0.0%	88.0%	0.0%	20.00%	0.12000	0.015	7.92	7.92	0.01	0.34	0.06	0.00	39.60	75%		0.00
gelcoat	10.80	33.00%	0.0%	33.0%	0.0%	70.00%	1.31000	0.015	3.56	3.56	0.04	0.88	0.16	0.16	5.09	75%		0.16
mold release	7.24	100.00%	0.0%	100.0%	0.0%	0.00%	0.06920	0.015	7.24	7.24	0.01	0.18	0.03	0.00	ERR	75%		0.00
<i>Composites</i>																		
putty	15.00	17.80%	0.0%	17.8%	0.0%	80.00%	0.50000	0.015	2.67	2.67	0.02	0.48	0.09	0.00	3.34	100%		0.00
<i>Cleaners/Solvents</i>																		
thinner	6.80	100.00%	0.0%	100.0%	0.0%	0.00%	0.00340	0.015	6.80	6.80	0.00	0.01	0.00	0.00	ERR			0.00
<b>Truck Cap Resin (SV-1 &amp; 2) and Gelcoat (SV-4) Booths</b>																		
<i>Gelcoat/Resin/Catalyst</i>																		
resin	9.16	39.20%	0.0%	39.2%	0.0%	58.00%	2.40000	8.125	3.59	3.59	18.13	435.24	79.43	118.92	6.19	75%	98%	2.38
catalyst 702	9.00	88.00%	0.0%	88.0%	0.0%	20.00%	0.12000	8.125	7.92	7.92	7.72	185.33	33.82	1.15	39.60	75%		1.15
gelcoat	9.99	38.00%	0.0%	38.0%	0.0%	43.00%	0.20000	8.125	3.80	3.80	3.21	77.13	14.08	11.02	8.83	75%		11.02
mold release	7.24	100.00%	0.0%	100.0%	0.0%	0.00%	0.01320	8.125	7.24	7.24	0.78	18.64	3.40	0.00	ERR	75%		0.00

\* potential VOC emissions from the resin and gelcoat applications are determined based on flash off of 25.9% for the resin and 52.1% for the gelcoat

<b>Total State Potential Emissions</b> (only the worst case coating emissions have been added to the solvent usage for the large paint booth)	<b>45.51</b>	<b>1092.18</b>	<b>199.32</b>	<b>141.80</b>	<b>15.38</b>
<b>Limited Total Emissions</b>	<b>0.00</b>	<b>0.00</b>	<b>N.A.</b>	<b>0.00</b>	<b>0.00</b>

**METHODOLOGY**  
Pounds of VOC per Gallon Coating less Water = (Density (lb/gal) \* Weight % Organics) / (1-Volume % water)  
Pounds of VOC per Gallon Coating = (Density (lb/gal) \* Weight % Organics)  
Potential VOC Pounds per Hour = Pounds of VOC per Gallon coating (lb/gal) \* Gal of Material (gal/unit) \* Maximum (units/hr)  
Potential VOC Pounds per Day = Pounds of VOC per Gallon coating (lb/gal) \* Gal of Material (gal/unit) \* Maximum (units/hr) \* (24 hr/day)  
Potential VOC Tons per Year = Pounds of VOC per Gallon coating (lb/gal) \* Gal of Material (gal/unit) \* Maximum (units/hr) \* (8760 hr/yr) \* (1 ton/2000 lbs)  
Particulate Potential Tons per Year = (units/hour) \* (gal/unit) \* (lbs/gal) \* (1-Weight % Volatiles) \* (1-Transfer efficiency) \* (8760 hrs/yr) \* (1 ton/2000 lbs)  
Pounds VOC per Gallon of Solids = (Density (lbs/gal) \* Weight % organics) / (Volume % solids)  
Total = Worst Coating + Sum of all solvents used

cutcoat-wk4-9/95

Appendix A: Emissions Calculations  
Potential HAP Emissions

Company Name: Covermaster, Inc. CP#: 039-9337  
City, Indiana: Elkhart, Indiana Plt ID: 039-00137  
Reviewer: Janusz Johnson  
Date: January 29,1998

Material	MEK 75-93-3		MIBK 108-10-1		Toluene 108-88-3		Xylene 1330-20-7		Glycol Ethers		Methanol 67-56-1		Styrene 100-42-5		Dimethyl Phthalate 131-11-3	
	wt. %	Emissions (ton/yr) *	wt. %	Emissions (ton/yr) *	wt. %	Emissions (ton/yr) *	wt. %	Emissions (ton/yr) *	wt. %	Emissions (ton/yr) *	wt. %	Emissions (ton/yr) *	wt. %	Emissions (ton/yr) *	wt. %	Emissions (ton/yr) *
<b>One (1) Large Paint Booth (SV-14 &amp; 15)</b>																
<i>Solvent/Cleaners</i>																
thinner	10.00%	0.24	10.00%	0.24	60.00%	1.45		0.00		0.00	10.00%	0.24		0.00		0.00
<i>Paint</i>																
7600S	12.00%	5.45	7.00%	3.18	18.00%	8.18	25.00%	11.36		0.00		0.00		0.00		0.00
7020G	1.00%	0.39		0.00		0.00	13.00%	5.03	1.00%	0.39		0.00		0.00		0.00
7185S		0.00	5.00%	3.22		0.00		0.00		0.00		0.00		0.00		0.00
580S		0.00		0.00	8.00%	8.47		0.00		0.00		0.00		0.00		0.00
<b>Three (3) Mold Shop Booths (SV-16, 17, 18) and Repair area</b>																
<i>Gelcoat/Resin/Catalyst</i>																
resin/MR1302		0.00		0.00		0.00		0.00		0.00		0.00	40.00%	0.32		0.00
catalyst 702		0.00		0.00		0.00		0.00		0.00		0.00		0.00	35.00%	0.02
gelcoat	5.00%	0.02		0.00		0.00		0.00		0.00		0.00	25.00%	0.12		0.00
mold release		0.00		0.00	70.00%	0.02		0.00		0.00		0.00		0.00		0.00
<i>Composites</i>																
putty		0.00		0.00		0.00		0.00		0.00		0.00	17.80%	0.09		0.00
<i>Cleaners/Solvents</i>																
thinner	10.00%	0.00	10.00%	0.00	60.00%	0.00		0.00		0.00	10.00%	0.00		0.00		0.00
<b>Truck Cap Resin (SV-1 &amp; 2) and Gelcoat (SV-4) Booths</b>																
<i>Gelcoat/Resin/Catalyst</i>																
resin		0.00		0.00		0.00		0.00		0.00		0.00	39.20%	79.43		0.00
catalyst 702		0.00		0.00		0.00		0.00		0.00		0.00		0.00	35.00%	13.45
gelcoat		0.00		0.00		0.00		0.00		0.00		0.00	38.00%	14.08		0.00
mold release		0.00		0.00	70.00%	2.38		0.00		0.00		0.00		0.00	35.00%	1.19

\* potential VOC emissions from the resin and gelcoat applications are determined based on flash off of 25.9% for the resin and 52.1% for the gelcoat

<b>POTENTIAL EMISSIONS (tons/yr)</b>	<b>5.72</b>	<b>3.46</b>	<b>12.32</b>	<b>11.36</b>	<b>0.39</b>	<b>0.24</b>	<b>94.04</b>	<b>14.67</b>
<b>Total HAPS potential:</b>	<b>142.20</b>							
(only the worst case coating emissions have been added to the solvent usage for the large paint booth)								
<b>LIMITED EMISSIONS (tons/yr)</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>0.00</b>
<b>Total HAPS potential:</b>	<b>0.00</b>							