

**CONSTRUCTION PERMIT
OFFICE OF AIR MANAGEMENT**

**Monaco Coach Corporation
1722 Mishawaka Road
Elkhart, Indiana 46513-0313**

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-039-9835-00182	
Issued by: Paul Dubenetzky, Branch Chief Office of Air Management	Issuance Date:

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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 Management (OAM), and presented in the permit application.

A.1 General Information

The Permittee owns and operates a stationary towable and motorized recreational vehicle manufacturing plant.

Responsible Official: James V. Sheldon
Source Address: 1722 Mishawaka Road, Elkhart, Indiana 46513-0313
Mailing Address: 1722 Mishawaka Road, P.O. Box 4313, Elkhart, Indiana 46513-0313
SIC Code: 3716, 3792
County Location: Elkhart
County Status: Attainment for all criteria pollutants
Source Status: Part 70 Permit Program
Major Source, under PSD Rules;
Major Source, Section 112 of the Clean Air Act

A.2 Emission Units and Pollution Control Equipment Summary

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

Paint Plant - Fiberglass Plant (towables: end caps, storage boxes, bathroom fixtures)

- (1) One (1) mold prep and clean-up operation, identified as PA-1, with a maximum capacity of parts which can accommodate 4.5 recreational vehicle parts per hour, exhausting to stacks SV-13, SV-14, SV-15, and SV-16.
- (2) One (1) fiberglass production operation consisting of one (1) gelcoat booth and four (4) resin application stations, identified as GB-1, FB-1, FB-2, FB-3 and FB-4, with a maximum capacity of parts which can accommodate 4.5 recreational vehicle per hour, exhausting to stacks SV-19, SV-20, SV-24 and SV-25.
- (3) One (1) fiberglass closed tooling operation, identified as CT-1, with a maximum capacity to build parts for 4.5 recreational vehicles per hour, exhausting to stacks SV-17 and SV-18.
- (4) One (1) fiberglass cure booth and one (1) gelcoat cure booth, identified as GCB-1 and FCB-1, each with a maximum capacity to cure parts which can accommodate 4.5 recreational vehicles per hour, exhausting to stacks SV-21, SV-22, SV-26, and SV-27.
- (5) One (1) fiberglass final finish area, identified as Final Finish, with a maximum capacity of parts which can accommodate 4.5 recreational vehicles per hour, exhausting to stacks SV-17 and SV-18.
- (6) Three (3) closed loop grinding booths, identified as DC-FG1, DC-FG2, and DC-FG3, each with a maximum capacity of 150.0 pounds per hour with particulate matter controlled by a closed loop dust collector, each exhausting to stack DC-FG .
- (7) One (1) natural gas fired air make-up unit, identified as AMU-10, with a maximum heat input rate of 4.0 million British thermal units per hour (MMBtu/hr).

Windsor Plant

- (8) One (1) door surface coating booth located at the Windsor Plant, with a maximum capacity of 0.9 metal doors per hour, exhausting to stack SV-27.

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

This stationary source is required to have a Part 70 permit by 326 IAC 2-7-2 (Applicability) because:

- (a) It is a major source, as defined in 326 IAC 2-7-1(22).
- (b) The source has submitted their Title V application (T-039-7511-00182), on December 12, 1996.

SECTION B GENERAL CONSTRUCTION AND OPERATION CONDITIONS

THIS SECTION OF THE PERMIT IS BEING ISSUED UNDER THE PROVISIONS OF 326 IAC 2-1 AND 40 CFR 52.780, WITH CONDITIONS LISTED BELOW.

Construction Conditions [326 IAC 2-1-3.4]

B.1 General Construction Conditions

- (a) 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) 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.2 Effective Date of the Permit [IC13-15-5-3]

Pursuant to IC 13-15-5-3, this permit becomes effective upon its issuance.

B.3 Revocation of Permits [326 IAC 2-1-9(b)]

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

B.4 Permit Review Rules [326 IAC 2]

Notwithstanding Operation Condition B.11, all requirements and conditions of this construction permit 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.5 First Time Operation Permit [326 IAC 2-1-4]

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) The 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 2-1-7.1 (Fees).

Operation Conditions

B.6 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 (IC13-17) and the rules promulgated thereunder.

B.7. 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.

B.8 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 Management (OAM) 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 OAM, 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]

B.9 Transfer of Permit [326 IAC 2-1-6]

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

- (a) In the event that ownership of this recreational vehicle manufacturing operation 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.

B.10 Permit Revocation [326 IAC 2-1-9]

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).

B.11 Availability of Permit [326 IAC 2-1-3(I)]

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

SECTION C

SOURCE OPERATION CONDITIONS

Entire Source

Emission Limitation and Standards

C.1 PSD Major Source Status [326 IAC 2-2] [40 CFR 52.21]

- (a) The total source potential to emit of volatile organic compounds (VOC) is limited to less than 250 tons per year. Therefore, the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration) and 40 CFR 52.21 will not apply.
- (b) Any change or modification which may increase the potential to emit to two hundred fifty (250) tons per year or more (326 IAC 2-2), from the equipment covered in this construction permit must be approved by the Office of Air Management (OAM) before such change may occur.

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

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.3 Operation of Equipment [326 IAC 2-1-3]

All air pollution control equipment listed in this permit shall be in place or operated at all times that the emission units vented to the control equipment are in operation, as described in Section D of this permit.

C.4 Stack Height [326 IAC 1-7]

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

Testing Requirements [326 IAC 3-6]

C.5 Performance Testing [326 IAC 3-6]

- (a) All testing shall be performed according to the provisions of 326 IAC 3-6 (Source Sampling Procedures), except as provided elsewhere in this permit, utilizing methods approved by IDEM, OAM.

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

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

no later than thirty-five (35) days prior to the intended test date. The Permittee shall submit a notice of the actual test date to the above address so that it is received at least two weeks prior to the test date.

- (b) All test reports must be received by IDEM, OAM within forty-five (45) days after the completion of the testing. An extension may be granted by the Commissioner, if the source submits to IDEM, OAM, a reasonable written explanation within five (5) days prior to the end of the initial forty-five (45) day period.

Compliance Monitoring Requirements

C.6 Compliance Monitoring [326 IAC 2-1-3]

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 may extend the compliance schedule an additional ninety (90) days provided the Permittee notifies:

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

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

C.7 Monitoring Methods [326 IAC 3]

Any monitoring or testing performed to meet the applicable 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.8 Pressure Gauge Specifications [326 IAC 2-1-3]

Whenever a condition in this permit requires the measurement of pressure drop across any part of the unit or its control device, the gauge employed shall have a scale such that the expected normal reading shall be no less than twenty percent (20%) of full scale and be accurate within plus or minus two percent ($\pm 2\%$) of full scale reading.

C.9 Asbestos Abatement Projects [326 IAC 14-10] [326 IAC 18] [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 ensure that a written notification is sent on a form provided by the Commissioner at least ten (10) working days before asbestos stripping or removal work or before demolition begins, per 326 IAC 14-10-3, and shall update such notice as necessary, including, but not limited to the following:
- (1) When the amount of affected asbestos containing material increases or decreases by at least twenty percent (20%); or
 - (2) If there is a change in the following:
 - (A) Asbestos removal or demolition start date;

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

All required notifications shall be submitted to:

Indiana Department of Environmental Management
Asbestos Section, Office of Air 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.

Corrective Actions and Response Steps

C.10 Emergency Reduction Plans [326 IAC 1-5-2] [326 IAC 1-5-3]

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 days from the date on which this source commences operation.
- (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.
- (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 episode level. [326 IAC 1-5-3]

Record Keeping Requirements

C.11 Emission Statement [326 IAC 2-6]

- (a) The Permittee shall submit an annual emission statement certified pursuant to the requirements of 326 IAC 2-6, that must be received by April 15 of each year and must comply with the minimum requirements specified in 326 IAC 2-6-4. The annual emission statement shall meet the following requirements:
 - (1) Indicate actual emissions of criteria pollutants from the source, in compliance with 326 IAC 2-6 (Emission Reporting);
 - (2) Indicate actual emissions of other regulated pollutants from the source, for purposes of Part 70 fee assessment.
- (b) The annual emission statement covers the twelve (12) consecutive month time period starting December 1 and ending November 30. The annual emission 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
- (c) 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.12 Monitoring Data Availability [326 IAC 2-1-3]

- (a) With the exception of performance tests conducted in accordance with Section C-Performance Testing, all observations, sampling, maintenance procedures, and record keeping, required as a condition of this permit shall be performed at all times the equipment is operating at normal representative conditions.
- (b) As an alternative to the observations, sampling, maintenance procedures, and record keeping of subsection (a) above, when the equipment listed in Section D of this permit is not operating, the Permittee shall either record the fact that the equipment is shut down or perform the observations, sampling, maintenance procedures, and record keeping that would otherwise be required by this permit.
- (c) If the equipment is operating but abnormal conditions prevail, additional observations and sampling should be taken with a record made of the nature of the abnormality.

- (d) If for reasons beyond its control, the operator fails to make required observations, sampling, maintenance procedures, or record keeping, reasons for this must be recorded.
- (e) At its discretion, IDEM may excuse such failure providing adequate justification is documented and such failures do not exceed five percent (5%) of the operating time in any quarter.
- (f) Temporary, unscheduled unavailability of staff qualified to perform the required observations, sampling, maintenance procedures, or record keeping shall be considered a valid reason for failure to perform the requirements stated in (a) above.

C.13 General Record Keeping Requirements [326 IAC 2-1-3]

- (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 for a minimum of three (3) years and available upon the request of an IDEM, OAM, representative. 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 written request for records to the Permittee, the Permittee shall furnish the records to the Commissioner within a reasonable time.
- (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.
- (d) All record keeping requirements not already legally required shall be implemented within ninety (90) days of permit issuance.

C.14 General Reporting Requirements [326 IAC 2-1-3]

- (a) To affirm that the source has met all the compliance monitoring 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.
- (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.

Stratospheric Ozone Protection

C.15 Stratospheric Ozone Protection [Compliance with 40 CFR 82 and 326 IAC 22-1]

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

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

SECTION D.1

FACILITY CONDITIONS

Paint Plant - Fiberglass Plant (towables: end caps, storage boxes, bathroom fixtures)

- (1) One (1) mold prep and clean-up operation, identified as PA-1, with a maximum capacity of parts which can accommodate 4.5 recreational vehicle parts per hour, exhausting to stacks SV-13, SV-14, SV-15, and SV-16.
- (2) One (1) fiberglass production operation consisting of one (1) gelcoat booth and four (4) resin application stations, identified as GB-1, FB-1, FB-2, FB-3 and FB-4, with a maximum capacity of parts which can accommodate 4.5 recreational vehicle per hour, exhausting to stacks SV-19, SV-20, SV-24 and SV-25.
- (3) One (1) fiberglass closed tooling operation, identified as CT-1, with a maximum capacity to build parts for 4.5 recreational vehicles per hour, exhausting to stacks SV-17 and SV-18.
- (4) One (1) fiberglass cure booth and one (1) gelcoat cure booth, identified as GCB-1 and FCB-1, each with a maximum capacity to cure parts which can accommodate 4.5 recreational vehicles per hour, exhausting to stacks SV-21, SV-22, SV-26, and SV-27.
- (5) One (1) fiberglass final finish area, identified as Final Finish, with a maximum capacity of parts which can accommodate 4.5 recreational vehicles per hour, exhausting to stacks SV-17 and SV-18.

Emissions Limitation and Standards

D.1.1 Volatile Organic Compounds (VOC) [326 IAC 8-1-6]

Pursuant to 326 IAC 8-1-6, the new fiberglass and gelcoating operations at the Paint/Fiberglass Plant (mold prep and clean-up operations, fiberglass production - gelcoat booth and resin application booths, fiberglass closed tooling, and gelcoat and resin cure booths) 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. BACT for the reinforced plastics operations shall be satisfied by the requirements of 326 IAC 2-1-3.4 (New Source Toxics Control) specified in Condition D.1.2.

D.1.2 New Source Toxics Control [326 IAC 2-1-3.4]

Pursuant to the MACT determination under 326 IAC 2-1-3.4, operating conditions for the new fiberglass and gel coating operations at the Paint/Fiberglass Plant (mold prep and clean-up operations, fiberglass production - gel coat booth and resin application booths, fiberglass closed tooling, and gelcoat and resin cure booths) 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 100 tons per twelve (12) consecutive months. 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%, or the use of 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 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 solvent.
 - (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.

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

Pursuant to 326 IAC 6-3-2(c), the particulate matter emissions from the fiberglass operations shall not exceed the pound per hour emission rate established as E in the following formula:

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

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

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

$$E = 55.0 P^{0.11} - 40 \quad \text{where } E = \text{rate of emission in pounds per hour; and} \\ P = \text{process weight rate in tons per hour}$$

D.1.4 Preventive Maintenance Plan [326 IAC 1-6-3]

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

Compliance Determination Requirements

D.1.5 Testing Requirements [326 IAC 3-2.1]

The Permittee is not required to test this facility by this permit. However, IDEM may require compliance testing at any specific time when necessary to determine if the facility is in compliance. If testing is required by IDEM, compliance with the volatile organic compound and HAP limit specified in Condition D1.2 shall be determined by a performance test conducted in accordance with Section C - Performance Testing.

D.1.6 Volatile Organic Compounds (VOC)

Compliance with the monomer content and usage limitations contained in Condition D.1.2 shall be determined pursuant to 326 IAC 8-1-4(a)(3) and 326 IAC 8-1-2(a) using formulation data supplied by the manufacturer. However, IDEM, OAM, reserves the authority to determine compliance using Method 24 in conjunction with the analytical procedures specified in 326 IAC 8-1-4.

D.1.7 Particulate Matter (PM)

The dry filters for particulate matter control shall be in operation at all times when the fiberglass facilities are in operation.

Compliance Monitoring Requirements

D.1.8 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 fiberglass facilities' stack while one or more of the facilities 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 particulate matter 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.

D.1.9 Visible Emissions Notations

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

- (b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.
- (c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.
- (d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.
- (e) The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when an abnormal emission is observed.

Record Keeping and Reporting Requirements

D.1.10 Record Keeping Requirements

- (a) To document compliance with Condition D.1.2, 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 volatile organic HAP emission limit established in Condition D.1.2.
 - (1) The usage by weight and monomer content of each resin and gel coat. 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 use for each month.
- (b) To document compliance with Condition D.1.8, 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) To document compliance with Condition D.1.9, the Permittee shall maintain records of daily visible emission notations of the fiberglass operations' stack exhaust.
- (d) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

D.1.11 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.

SECTION D.2 FACILITY CONDITIONS

PSD Minor Limit Conditions for the Source

Emission Limitations and Standards

D.2.1 PSD Minor Limit [326 IAC 2-2] [40 CFR 52.21]

- (a) Pursuant to CP 039-4577-00182, issued on March 26, 1996, the total input of volatile organic compounds delivered to the applicators of surface coating and fiberglass facilities including adhesives and clean-up solvents for the Service Paint Area, Dynasty Plant (existing facilities and new facilities), Windsor Plant, and Roadmaster Plant shall be limited to less than 250 tons per twelve (12) consecutive month period. This production limitation is equivalent to limiting the potential to emit of volatile organic compounds to less than 250 tons per year. Therefore, the Prevention of Significant Deterioration (PSD) rules, 326 IAC 2-2, 40 CFR 52.21 and 40 CFR 124, will not apply.
- (b) The equipment covered by Condition D.1 of this permit shall be included in the limit established by D.2.1(a), using the methodology for demonstrating compliance with the MACT determination as established in Conditions D.1.2, and D.1.6, and D.1.10.
- (c) Any change or modification which may increase the potential to emit to 250 tons per year, from the equipment covered in this permit, shall require a PSD permit pursuant to 326 IAC 2-2, before such change may occur.

Compliance Determination Requirements

D.2.2 VOC Emissions

Compliance with Condition D.2.1 shall be demonstrated at the end of each month based on the total volatile organic compound usage for the most recent twelve (12) month period. This volatile organic compound usage limitation is equivalent to volatile organic compound emissions of less than 250 tons per twelve (12) consecutive months.

Record Keeping and Reporting Requirements

D.2.3 Record Keeping Requirements

- (a) To document compliance with Condition D.2.1 the Permittee shall maintain records in accordance with (1) through (6) below. Records maintained for (1) through (6) shall be taken monthly and shall be complete and sufficient to establish compliance with the VOC usage limits and/or the VOC emission limits established in Condition D.2.1.
 - (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) A log of the dates of use;
 - (3) The volume weighted VOC content of the coatings used for each month;
 - (4) The cleanup solvent usage for each month;

- (5) The total VOC usage for each month; and
 - (6) The weight of VOCs emitted, including volatile organic HAP emitted from the fiberglass operations, for each compliance period.
- (b) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

D.2.4 Reporting Requirements

A quarterly summary of the information to document compliance with Condition D.2.1 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.

SECTION D.3 FACILITY CONDITIONS

Paint Plant - Fiberglass Plant (towables: end caps, storage boxes, bathroom fixtures)

Three (3) closed loop grinding booths, identified as DC-FG1, DC-FG2, and DC-FG3, each with a maximum capacity of 150.0 pounds per hour with particulate matter controlled by a closed loop dust collector, each exhausting to stack DC-FG .

Emissions Limitation and Standards

D.3.1 Particulate Matter (PM) [326 IAC 6-3-2(c)]

Pursuant to 326 IAC 6-3-2(c) (Process operations: particulate emission limitations), the combined allowable particulate matter emitted from the three (3) closed loop grinding booths shall not exceed 1.53 pounds per hour.

Compliance Determination Requirements

D.3.2 Testing Requirements [326 IAC 3-2.1]

The Permittee is not required to test this facility by this permit. However, IDEM may require compliance testing at any specific time when necessary to determine if the facility is in compliance. If testing is required by IDEM, compliance with the particulate matter limit specified in Condition D.3.1 shall be determined by a performance test conducted in accordance with Section C - Performance Testing.

D.3.3 Particulate Matter (PM)

The dust collector for particulate matter control shall be in operation at all times when the three (3) closed loop grinding booths are in operation.

Compliance Monitoring Requirements

D.3.4 Visible Emissions Notations

- (a) Daily visible emission notations of the three (3) closed loop grinding booths stack exhaust shall be performed during normal daylight operations when exhausting to the atmosphere. A trained employee will record whether emissions are normal or abnormal.
- (b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.

- (c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.
- (d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.
- (e) The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when an abnormal emission is observed.

D.3.5 Parametric Monitoring

The Permittee shall record the total static pressure drop across the dust collector used in conjunction with the closed loop grinding booths, at least once weekly when the three (3) closed loop grinding booths are in operation. Unless operated under conditions for which the Compliance Response Plan specifies otherwise, the pressure drop across the baghouse shall be maintained within the range of 1.0 and 6.0 inches of water or a range established during the latest stack test. The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when the pressure reading is outside of the above mentioned range for any one reading.

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

D.3.6 Baghouse Inspections

An inspection shall be performed each calendar quarter of all bags controlling the three (3) closed loop grinding booths when venting to the atmosphere. A baghouse inspection shall be performed within three months of redirecting vents to the atmosphere and every three months thereafter. Inspections are optional when venting to the indoors. All defective bags shall be replaced.

D.3.7 Broken Bag or Failure Detection

In the event that bag failure has been observed:

- (a) The affected compartments will be shut down immediately until the failed units have been repaired or replaced. For single compartment baghouses, failed units and the associated process will be shut down immediately until the failed units have been repaired or replaced.
- (b) Within eight (8) hours of the determination of failure, response steps according to the timetable described in the Compliance Response Plan shall be initiated. For any failure with corresponding response steps and timetable not described in the Compliance Response Plan, response steps shall be devised within eight (8) hours of discovery of the failure and shall include a timetable for completion.

Record Keeping and Reporting Requirements

D.3.8 Record Keeping Requirements

- (a) To document compliance with Condition D.3.1, the Permittee shall maintain records of daily visible emission notations of the stack exhaust at each of the abrasive cleaning units.
- (b) To document compliance with Condition D.3.5, the Permittee shall maintain the

- (1) Daily records of the following operational parameters during normal operation:
 - (A) Inlet and outlet differential static pressure; and
 - (B) Cleaning cycle: frequency and differential pressure.
 - (2) Documentation of all corrective actions implemented, per event.
 - (3) Operation and preventive maintenance logs, including work purchase orders, shall be maintained.
 - (4) Quality Assurance/Quality Control (QA/QC) procedures.
 - (5) Operator standard operating procedures (SOP).
 - (6) Manufacturer's specifications or its equivalent.
 - (7) Equipment "troubleshooting" contingency plan.
- (c) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

D.3.9 Reporting Requirements

A summary of the information to document compliance with Conditions D.3.1 and D.3.5 shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit, upon request.

SECTION D.4

FACILITY CONDITIONS

Windsor Plant

One (1) door surface coating booth located at the Windsor Plant, with a maximum capacity of 0.9 metal doors per hour, exhausting to stack SV-27.

Emissions Limitation and Standards

D.4.1 Volatile Organic Compounds (VOC) [326 IAC 8-2-9]

- (a) Pursuant to 326 IAC 8-2-9 (Miscellaneous Metal Coating Operations), the volatile organic compound (VOC) content of all coatings delivered to the applicator for the coating of the metal doors shall be limited to 3.5 pounds of VOCs per gallon of coating less water, for extreme performance coatings.
- (b) Solvent sprayed from application equipment during cleanup or color changes shall be directed into containers. Such containers shall be closed as soon as such solvent spraying is complete, and the waste solvent shall be disposed of in such a manner that evaporation is minimized.

D.4.2 Particulate Matter (PM) [326 IAC 6-3-2(c)]

Pursuant to 326 IAC 6-3-2(c), the particulate matter emissions from the surface coating operation shall not exceed the pound per hour emission rate established as E in the following formula: Interpolation and extrapolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

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

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

$$E = 55.0 P^{0.11} - 40 \quad \text{where } E = \text{rate of emission in pounds per hour; and} \\ P = \text{process weight rate in tons per hour}$$

D.4.3 Preventive Maintenance Plan [326 IAC 1-6-3]

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

Compliance Determination Requirements

D.4.4 Testing Requirements [326 IAC 3-2.1]

The Permittee is not required to test this facility by this permit. However, IDEM may require compliance testing at any specific time when necessary to determine if the facility is in compliance. If testing is required by IDEM, compliance with the volatile organic compound limit specified in Condition D.4.1 and the particulate matter limit specified in Condition D.4.2 shall be determined by a performance test conducted in accordance with Section C - Performance Testing.

D.4.5 Volatile Organic Compounds (VOC)

Compliance with the VOC content and usage limitations contained in Condition D.4.1 shall be determined pursuant to 326 IAC 8-1-4(a)(3)(A) and 326 IAC 8-1-2(a)(7) using formulation data supplied by the coating manufacturer. IDEM, OAM, reserves the authority to determine compliance using Method 24 in conjunction with the analytical procedures specified in 326 IAC 8-1-4.

Compliance Monitoring Requirements

D.4.6 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 facility's stack 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 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.

D.4.7 Visible Emissions Notations

- (a) Daily visible emission notations of the surface coating facility's stack exhaust shall be performed during normal daylight operations. A trained employee shall record whether emissions are normal or abnormal.
- (b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.
- (c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.
- (d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.
- (e) The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when an abnormal emission is observed.

Record Keeping and Reporting Requirements

D.4.8 Record Keeping Requirements

- (a) To document compliance with Condition D.4.1, the Permittee shall maintain records in accordance with (1) through (6) below. Records maintained for (1) through (6) shall be taken monthly and shall be complete and sufficient to establish compliance with the VOC usage limits and/or the VOC emission limits established in Condition D.4.1.
 - (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) A log of the dates of use;
 - (3) The volume weighted VOC content of the coatings used for each month;
 - (4) The cleanup solvent usage for each month;
 - (5) The total VOC usage for each month; and
 - (6) The weight of VOCs emitted for each compliance period.
- (b) To document compliance with Condition D.4.6, 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.4.9 Reporting Requirements

A summary of the information to document compliance with Condition D.4.1 shall be submitted to the addresses listed in Section C - General Reporting Requirements, of this permit, upon request.

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. The requirements of this rule (326 IAC 1-6) shall apply to the owner or operator of any facility which has the potential to emit twenty-five (25) pounds per hour of particulates, one hundred (100) pounds per hour of volatile organic compounds or SO₂, or two thousand (2,000) pounds per hour of any other pollutant; or to the owner or operator of any facility with emission control equipment which suffers a malfunction that causes emissions in excess of the applicable limitation.

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. (Air Pollution Control Board; 326 IAC 1-2-39; filed Mar 10, 1988, 1:20 p.m. : 11 IR 2373)

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

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

**Indiana Department of Environmental Management
Office of Air Management
Compliance Data Section**

Quarterly Report

Company Name: Monaco Coach Corporation
Location: 1722 Mishawaka Road, Elkhart, Indiana 46513-0313
Permit No.: 039-9835-00182
Source: Fiberglass Operations
Pollutant: VOC PTE
Limit: less than 250 tons per twelve consecutive months

Year: _____

Month	Usage (tons/m onth)	Usage for previous month (tons)	Usage for previous twelve month period	Usage (tons/month)	Usage for previous month (tons)	PTE for previous twelve month period

Submitted by: _____

Title/Position: _____

Signature: _____

Date: _____

Phone: _____

Flash-Off: _____

Indiana Department of Environmental Management Office of Air Management

Technical Support Document (TSD) for New Construction and Operation

Source Background and Description

Source Name:	Monaco Coach Corporation
Source Location:	1722 Mishawaka Road, Elkhart, Indiana 46513-0313
County:	Elkhart
Construction Permit No.:	CP-039-9835-00182
SIC Code:	3716, 3792
Permit Reviewer:	Angie Lee

The Office of Air Management (OAM) has reviewed an application from Monaco Coach Corporation relating to the construction and operation of a stationary towable recreational vehicle manufacturing plant, consisting of the following equipment:

Paint Plant - Fiberglass Plant (towables: end caps, storage boxes, bathroom fixtures)

- (1) One (1) mold prep and clean-up operation, identified as PA-1, with a maximum capacity of parts which can accommodate 4.5 recreational vehicle parts per hour, exhausting to stacks SV-13, SV-14, SV-15, and SV-16.
- (2) One (1) fiberglass production operation consisting of one (1) gelcoat booth and four (4) resin application stations, identified as GB-1, FB-1, FB-2, FB-3 and FB-4, with a maximum capacity of parts which can accommodate 4.5 recreational vehicle per hour, exhausting to stacks SV-19, SV-20, SV-24 and SV-25.
- (3) One (1) fiberglass closed tooling operation, identified as CT-1, with a maximum capacity to build parts for 4.5 recreational vehicles per hour, exhausting to stacks SV-17 and SV-18.
- (4) One (1) fiberglass cure booth and one (1) gelcoat cure booth, identified as GCB-1 and FCB-1, each with a maximum capacity to cure parts which can accommodate 4.5 recreational vehicles per hour, exhausting to stacks SV-21, SV-22, SV-26, and SV-27.
- (5) One (1) fiberglass final finish area, identified as Final Finish, with a maximum capacity of parts which can accommodate 4.5 recreational vehicles per hour, exhausting to stacks SV-17 and SV-18.
- (6) Three (3) closed loop grinding booths, identified as DC-FG1, DC-FG2, and DC-FG3, each with a maximum capacity of 150.0 pounds per hour with particulate matter controlled by a closed loop dust collector, each exhausting to stack DC-FG .
- (7) One (1) natural gas fired air make-up unit, identified as AMU-10, with a maximum heat input rate of 4.0 million British thermal units per hour (MMBtu/hr).

Windsor Plant

- (8) One (1) door surface coating booth located at the Windsor Plant, with a maximum capacity of 0.9 metal doors per hour, exhausting to stack SV-27.

Stack Summary

Stack ID	Operation	Height (feet)	Diameter (feet)	Flow Rate (acfm)	Temperature (°F)
SV-13 thru SV-16	mold prep and clean-up operation	30	3.5	21,400	70
SV-13 thru SV-20 and SV-23, 24	fiberglass production operation	30	SV-19 ,20, 24 are 3.5 and SV-25 is 0.8	SV-19,20 are 21,400 and SV-24 is 18,000 and SV-25 is 10,000	SV-19, 20, 24 are 70 and SV-25 is 90
SV-17 thru SV-18	fiberglass closed tooling operation, and fiberglass final finish area	30	3.0	18,125	70
SV-21, 22 and SV-25, 26	fiberglass cure booth and gelcoat cure booth	30	SV-21, 22 are 1.0 and SV-26 are 0.83 and SV-27 is 1.66	SV-21, 22 are 12,000 and SV-26 is 1,000 and SV-27 is 10,000	SV- 21, 22, 26 are 90 and SV-27 is 70
DC-FG	closed loop grinding booths	--	-	-	70

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 November 20, 1997, with additional information received on December 17, 1997, April 30, 1998, May 19, 1998, and June 19, 1998.

Emissions Calculations

See Appendix A (Emissions Calculation Spreadsheets) for detailed calculations (two (3) pages).

Potential particulate matter emissions from the grinding operations:

Efficiency = 99.5% standard conversion: 1 pound = 7000 grains

E_{out} = (Outlet grain loading (gr/dscf)) (Air flow rate (dscfm))

E_{in} = (Inlet grain loading (gr/dscf)) (Air flow rate (dscfm))

$$(3.0 \text{ gr} \times 1 - .995) = 0.015 \text{ gr/dscf}$$

E_{out} = (0.015 gr/dscf) (20,000 dscfm)

$$= 300 \text{ gr/min}$$

$$= (300 \text{ gr/min})(60 \text{ min./hr})(1 \text{ lb}/7000 \text{ gr})$$

$$= \mathbf{2.57 \text{ lbs/hr after controls}}$$

E_{in} = (3.0 gr/dscf)(20,000 dscfm)

$$= 60,000 \text{ gr/min}$$

$$= (60,000 \text{ gr/min})(60 \text{ min/hr})(1 \text{ lb}/7000 \text{ gr})$$

$$= \mathbf{514.29 \text{ lbs/hr (2252.59 tons/yr) before controls}}$$

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)	6.70	3277.27
Particulate Matter (PM10)	6.70	3277.27
Sulfur Dioxide (SO ₂)	--	0.01
Volatile Organic Compounds (VOC)	--	282.07
Carbon Monoxide (CO)	--	0.4
Nitrogen Oxides (NO _x)	--	1.8
Xylene	--	0.004
Toluene	--	2.36
Styrene	--	281.97
MEK	--	3.95
Combination of HAPs	--	288.28

- (a) Allowable emissions are determined from the applicability of rule 326 IAC 6-3-2(c).

The three (3) closed loop grinding booths shall comply with 326 IAC 6-3-2(c) using the following equation:

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

$$E = 4.10 (0.23 \text{ ton/hr})^{0.67} = 1.53 \text{ lb/hr; } 6.70 \text{ ton/yr.}$$

The source complies with 326 IAC 6-3-2(c) because of the closed loop dust collector for the facilities which yields a total particulate matter after control emissions of 11.26 ton/yr.

- (b) The allowable emissions based on the rules cited are less than the potential emissions, therefore, the allowable emissions are used for the permitting determination.
- (c) Allowable emissions (as defined in the Indiana Rule) of VOC and particulate matter are greater than 25 tons per year. Therefore, pursuant to 326 IAC 2-1, Sections 1 and 3, a construction permit is required.
- (d) Allowable emissions (as defined in the Indiana Rule) of a single hazardous air pollutant (HAP) are greater than 10 tons per year and/or 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) 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 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 particulate matter, carbon monoxide, oxides of nitrogen and sulfur dioxide. 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	32.1
PM10	32.1
SO ₂	0.08
VOC	249.7
CO	2.83
NO _x	13.9

- (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) The above emissions were based on the Construction Permit # 039-4577-00182, issued on March 26, 1996

Part 70 Permit Determination

326 IAC 2-7 (Part 70 Permit Program)

This existing source has submitted their Part 70 (T-039-7511-00182) application on December 12, 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 Emission Standards for Hazardous Air Pollutants (NESHAP) (40 CFR, Part 63) applicable to this source.

State Rule Applicability

326 IAC 2-2 and 40 CFR 52.21 (PSD Minor Limit)

- (a) Pursuant to CP 039-4577-00182, issued on March 26, 1996, the total input of volatile organic compounds delivered to the applicators of surface coating and fiberglass facilities including adhesives and clean-up solvents for the Service Paint Area, Dynasty Plant (existing facilities and new facilities), Windsor Plant, and Roadmaster Plant shall be limited to less than 250 tons per twelve (12) consecutive month period. This production limitation is equivalent to limiting the potential to emit of volatile organic compounds to less than 250 tons per year. Therefore, the Prevention of Significant Deterioration (PSD) rules, 326 IAC 2-2, 40 CFR 52.21 and 40 CFR 124, will not apply.

- (b) The equipment covered by Condition D.1 of this permit shall be included in the limit established by D.2.1(a), using the methodology for demonstrating compliance with the MACT determination as established in Conditions D.1.2, and D.1.6, and D.1.10.
- (c) Any change or modification which may increase the potential to emit to 250 tons per year, from the equipment covered in this permit, shall require a PSD permit pursuant to 326 IAC 2-2, before such change may occur.

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/yr of VOC and is located in Elkhart County. 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 (Opacity Limitations)

That 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.

State Rule Applicability - Individual Facilities

Fiberglass Operations

326 IAC 8-1-6 (Volatile Organic Compounds (VOC))

Pursuant to 326 IAC 8-1-6, the new fiberglass and gelcoating operations at the Paint/Fiberglass Plant (mold prep and clean-up operations, fiberglass production - gelcoat booth and resin application booths, fiberglass closed tooling, and gelcoat and resin cure booths) 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. BACT for the reinforced plastics operations shall be satisfied by the requirements of 326 IAC 2-1-3.4 (New Source Toxics Control) specified in Condition D.1.2.

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

The proposed new source is subject to 326 IAC 2-1-3.4 because it is a construction, not a modification, of a major source of HAP, that is, it has the potential to emit either a single HAP greater than 10 tons/yr or a combination of HAPs greater than 25 ton/yr. Options that were considered for MACT were the following:

1. Add-on capture and control achieving 95% overall destruction efficiency; and
2. A combination of an emission limit and emission reduction techniques, specifically, a limit of less than 100 ton/yr HAP from resin and gel coat layup operations only, a limit on monomer contents of resins and gel coats, and use of a low-emitting method of application called flow coaters.

The best controlled sources in the fiberglass reinforced plastics fabrication industry were found to have installed capture and control systems with 95% overall destruction efficiency of HAP emissions. However, ample demonstration was made by the applicant that their proposed new source will be substantially dissimilar from the sources employing add-on control, dissimilar in size, configuration, potential to emit, and cost-effectiveness of control.

Because the applicant demonstrated to IDEM, OAM's satisfaction that Option 1 was not appropriate, and because they have accepted a limitation on their operations to maintain HAP emissions from resin and gel coat layup to less than 100 tons/yr, Option 2 has been determined to be MACT. The MACT for the new fiberglass and gel coating operations at the Paint/Fiberglass Plant (mold prep and clean-up operations, fiberglass production - gel coat booth and resin application booths, fiberglass closed tooling, and gelcoat and resin cure booths) is as follows:

- (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 100 tons per 12 consecutive months. 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%, or the use of 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 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 solvent.
- (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.

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 fiberglass facilities' stack while one or more of the facilities 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 particulate matter 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.

326 IAC 6-3-2(c) (Particulate Matter (PM))

Pursuant to 326 IAC 6-3-2(c), the particulate matter emissions from the fiberglass operations shall not exceed the pound per hour emission rate established as E in the following formula:

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

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

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

$$E = 55.0 P^{0.11} - 40 \quad \text{where } E = \text{rate of emission in pounds per hour; and} \\ P = \text{process weight rate in tons per hour}$$

Visible Emissions Notations:

- (a) Daily visible emission notations of the fiberglass facilities' stack exhaust shall be performed during normal daylight operations when exhausting to the atmosphere. A trained employee shall record whether emissions are normal or abnormal.
- (b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.
- (c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.
- (d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.
- (e) The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when an abnormal emission is observed.

Three (3) closed loop grinding booths

326 IAC 6-3-2(c) (Particulate Matter (PM))

Pursuant to 326 IAC 6-3-2 (Process operations: particulate emission limitations), the combined allowable particulate matter emitted from the three (3) closed loop grinding booths shall not exceed 1.53 pounds per hour.

Particulate Matter (PM)

The dust collector for particulate matter control shall be in operation at all times when the three (3) closed loop grinding booths are in operation.

Visible Emissions Notations:

- (a) Daily visible emission notations of the three (3) closed loop grinding booths stack exhaust shall be performed during normal daylight operations when exhausting to the atmosphere. A trained employee will record whether emissions are normal or abnormal.
- (b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.
- (c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.
- (d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.
- (e) The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when an abnormal emission is observed.

Parametric Monitoring:

The Permittee shall record the total static pressure drop across the dust collector used in conjunction with the closed loop grinding booths, at least once weekly when the three (3) closed loop grinding booths are in operation. Unless operated under conditions for which the Compliance Response Plan specifies otherwise, the pressure drop across the baghouse shall be maintained within the range of 1.0 and 6.0 inches of water or a range established during the latest stack test. The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when the pressure reading is outside of the above mentioned range for any one reading.

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

Baghouse Inspections:

An inspection shall be performed each calendar quarter of all bags controlling the three (3) closed loop grinding booths when venting to the atmosphere. A baghouse inspection shall be performed within three months of redirecting vents to the atmosphere and every three months thereafter. Inspections are optional when venting to the indoors. All defective bags shall be replaced.

Broken Bag or Failure Detection:

In the event that bag failure has been observed:

- (a) The affected compartments will be shut down immediately until the failed units have been repaired or replaced. For single compartment baghouses, failed units and the associated process will be shut down immediately until the failed units have been repaired or replaced.
- (b) Within eight (8) hours of the determination of failure, response steps according to the timetable described in the Compliance Response Plan shall be initiated. For any failure with corresponding response steps and timetable not described in the Compliance Response Plan, response steps shall be devised within eight (8) hours of discovery of the failure and shall include a timetable for completion.

Windsor Plant

Door Plant surface coating booth

326 IAC 8-2-9 (Volatile Organic Compounds (VOC))

- (a) Pursuant to 326 IAC 8-2-9 (Miscellaneous Metal Coating Operations), the volatile organic compound (VOC) content of all coatings delivered to the applicator for the coating of the metal doors shall be limited to 3.5 pounds of VOCs per gallon of coating less water, for extreme performance coatings.
- (b) Solvent sprayed from application equipment during cleanup or color changes shall be directed into containers. Such containers shall be closed as soon as such solvent spraying is complete, and the waste solvent shall be disposed of in such a manner that evaporation is minimized.

326 IAC 6-3-2(c) (Particulate Matter (PM))

Pursuant to 326 IAC 6-3-2(c), the particulate matter emissions from the surface coating operation shall not exceed the pound per hour emission rate established as E in the following formula:

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

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

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

$$E = 55.0 P^{0.11} - 40 \quad \text{where } E = \text{rate of emission in pounds per hour; and} \\ P = \text{process weight rate in tons per hour}$$

Volatile Organic Compounds (VOC)

Compliance with the VOC content and usage limitations contained in Condition D.3.1 shall be determined pursuant to 326 IAC 8-1-4(a)(3)(A) and 326 IAC 8-1-2(a)(7) using formulation data supplied by the coating manufacturer. IDEM, OAM, reserves the authority to determine compliance using Method 24 in conjunction with the analytical procedures specified in 326 IAC 8-1-4.

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 facility's stack 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 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.

Visible Emissions Notations:

- (a) Daily visible emission notations of the surface coating facility's stack exhaust shall be performed during normal daylight operations. A trained employee shall record whether emissions are normal or abnormal.

- (b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.
- (c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.
- (d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.
- (e) The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when an abnormal emission is observed.

Air Toxic Emissions

Indiana presently requests applicants to provide information on emissions of the 188 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 modification 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: 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 towable recreational vehicle manufacturing plant will be subject to the conditions of the attached proposed Construction Permit No. CP-039-9835-00182.

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

Addendum to the
Technical Support Document for Part 70 Operating Permit

Source Name:	Monaco Coach Corporation
Source Location:	1722 Mishawaka Road, Elkhart, Indiana 46513-0313
County:	Elkhart
SIC Code:	3716, 3792
Operation Permit No.:	T145-7655-00044
Permit Reviewer:	Angie Lee

On February 25, 1998, the Office of Air Management (OAM) had a notice published in The Elkhart Truth, Elkhart, Indiana, stating that Monaco Coach Corporation had applied for a Part 70 Operating Permit to operate a recreational vehicle manufacturing plant. The notice also stated that OAM proposed to issue a permit for this operation and provided information on how the public could review the proposed permit and other documentation. Finally, the notice informed interested parties that there was a period of thirty (30) days to provide comments on whether or not this permit should be issued as proposed.

Upon further review, OAM has made the following changes to the final Part 70 permit T039-7511-00182:

Since the time the Part 70 Operating Permit was public noticed, Monaco Coach Corporation decided that they needed their construction permit prior to issuance of their Part 70 Operating Permit. The new equipment (fiberglass operations) has been addressed in a new permit CP#039-9835-00182.

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

Monaco Coach Corporation
1722 Mishawaka Road, P.O. Box 4313
Elkhart, Indiana 46513-0313

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 Monaco Coach Corporation, 1722 Mishawaka Road, Elkhart, Indiana, 46513-0313, has constructed the fiberglass production equipment in conformity with the requirements and intent of the Enhanced New Source Review application received by the Office of Air Management on November 20, 1997, and as permitted pursuant to **Construction Permit No. CP039-9835-00182, Plant ID No. 039-00182** 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
Form DD: Reinforced Plastics and Composites
Fiberglass Processes

Company Name: Monaco Coach Corporation
Address City IN Zip: Elkhart, Indiana
CP: 039-9835-00182
Plt ID: 00182
Reviewer: A. Lee
Date: 6-30-98

VOC Emissions

Material	Density (lb/gal)	Weight % Styrene Monomer	Gallons per unit	Units per hour	Pound VOC per hour	Pounds VOC per day	Tons of VOC per Year	PM tons per year	Emission Factor (Flash off)	Transfer Efficiency
Solvent/Cleaners:										
Acetone hi-moisture	6.60	100.0%	1.06100	9.00	63.02	0.00	0.00	0.00	0.0%	80%
Acetone waste	7.50	80.0%	0.20000	9.00	10.80	0.00	0.00	2.37	0.0%	80%
Conditioner acrolac 5 gal pail	11.00	0.0%	0.02730	9.00	0.00	0.00	0.00	2.37	0.0%	80%
Resin/Gel:										
Catalyst 30 Clear	9.04	44.0%	0.66370	9.00	0.00	0.00	0.00	26.49	0.0%	80%
Catalyst lupersol DDM-9 Red	9.04	44.0%	0.05530	9.00	0.00	0.00	0.00	2.21	0.0%	80%
Gelcoat colonial white neo	8.59	37.0%	5.82072	9.00	31.30	751.25	137.10	248.35	18.8%	80%
Gelcoat patch booster	8.27	61.0%	0.12091	9.00	1.03	24.77	4.52	3.07	18.8%	80%
Gelcoat lund flex white primer	11.81	37.0%	0.00846	9.00	0.06	1.50	0.27	0.50	18.8%	80%
Marking fluid dykem blue	7.01	31.0%	0.00071	9.00	0.00	0.00	0.00	0.03	0.0%	80%
Resin spray application	8.63	35.0%	1.73812	9.00	3.31	79.38	14.49	76.87	7.0%	80%
Resin flow coat applicator	8.63	35.0%	17.38123	9.00	33.07	793.80	144.87	768.69	7.0%	80%
Resin filled	9.63	38.0%	4.15369	9.00	9.58	229.82	41.94	195.52	7.0%	80%
Resin haf	9.63	37.0%	0.72689	9.00	1.63	39.16	7.15	34.77	7.0%	80%
Resin neat bulk	8.85	42.0%	1.12994	9.00	2.65	63.50	11.59	45.73	7.0%	80%
Resin, low styrene, stypol	9.22	35.0%	2.16920	9.00	4.41	105.84	19.32	102.49	7.0%	80%
Resin unsat poly 22241	9.63	34.0%	2.07684	9.00	4.28	102.82	18.76	104.07	7.0%	80%
Wax/Release:										
Cleaner Mold Prep	7.05	100.0%	0.01418	9.00	0.00	0.00	0.00	0.00	0.0%	80%
Release	7.30	98.0%	0.00137	9.00	0.00	0.00	0.00	0.00	0.0%	80%
TR 112 green edge wax	6.40	85.0%	0.03906	9.00	0.00	0.00	0.00	0.30	0.0%	80%
TR 301 glaze	8.75	33.0%	0.01143	9.00	0.00	0.00	0.00	0.53	0.0%	80%
TR 307 fine finish compound	10.25	35.0%	0.00976	9.00	0.00	0.00	0.00	0.51	0.0%	80%
TR 308 fine finish I	9.00	9.0%	0.01111	9.00	0.00	0.00	0.00	0.72	0.0%	80%
TR 309 REG rubbing compound	10.25	22.0%	0.00976	9.00	0.00	0.00	0.00	0.61	0.0%	80%

METHODOLOGY

Potential VOC Pounds per Hour = Density (lb/gal) * Weight % Monomer * Gal of Material (gal/unit) * Maximum (unit/hr) * Emission factor

Potential VOC Pounds per Day = Density (lb/gal) * Weight % Monomer * Gal of Material (gal/unit) * Maximum (unit/hr) * (24 hrs / 1 day) * Emission factor

Potential VOC Tons per Year = Density (lb/gal) * Weight % Monomer * Gal of Material (gal/unit) * Maximum (unit/hr) * (8760 hr/yr) * (1 ton / 2000 lbs) * Emission factor

Particulate Potential Tons per Year = (units/hour) * (gal/unit) * (lbs/gal) * (1 - Weight % Volatiles) * (1 - Transfer efficiency) * (8760 hr/yr) * (1 ton / 2000 lbs)

Total = Worst Coating + Sum of all solvents used

Emission Factor for Hand Layup of resin NVS is 10%, VS is 7%, for Spray Layup of resin NVS is 13%, VS is 9%

Emission Factor for Hand and Spray Layup of gelcoat NVS is 35%, VS is 25%

Emission Factors are from AP42, Fifth Edition (January 1995), Table 4.4-2

NVS = Non-vapor suppressed resin

VS = Vapor suppressed resin

HAP Emission Calculations

Company Name: Monaco Coach Corporation 039-9835-000182
Plant Location: Elkhart, Indiana
County: Elkhart
Permit Reviewer: Angie Lee
Date: 6-30-98

Material	Density (Lb/Gal)	Gal of Mat (gal/unit)	Maximum (unit/hour)	Weight % Xylene	Weight % Toluene	Weight % MEK	Xylene Emissions (ton/yr)	Toluene Emissions (ton/yr)	MEK Emissions (ton/yr)
Solvent/Cleaners:									
Acetone hi-moisture	6.60	1.061000	9.00	0.00%	0.00%	0.00%	0.00	0.00	0.00
Acetone waste	7.50	0.200000	9.00	0.00%	0.00%	0.00%	0.00	0.00	0.00
Conditioner acrolac 5 gal pail	11.00	0.027300	9.00	0.00%	0.00%	0.00%	0.00	0.00	0.00
Resin/Gel:									
Catalyst 30 Clear	9.04	0.663700	9.00	0.00%	0.00%	1.00%	0.00	0.00	2.37
Catalyst Iupersol DDM-9 Red	9.04	0.055300	9.00	0.00%	0.00%	1.00%	0.00	0.00	0.20
Gelcoat colonial white neo	8.59	5.820720	9.00	0.00%	0.00%	0.00%	0.00	0.00	0.00
Gelcoat patch booster	8.27	0.120910	9.00	0.00%	0.00%	0.00%	0.00	0.00	0.00
Gelcoat lund flex white primer	11.81	0.008460	9.00	0.00%	0.00%	0.00%	0.00	0.00	0.00
Marking fluid dykem blue	7.01	0.000710	9.00	0.00%	0.00%	0.00%	0.00	0.00	0.00
Resin spray application	8.63	1.738120	9.00	0.00%	0.00%	0.00%	0.00	0.00	0.00
Resin flow coat applicator	8.63	17.381230	9.00	0.00%	0.00%	0.00%	0.00	0.00	0.00
Resin filled	9.63	4.153690	9.00	0.00%	0.00%	0.00%	0.00	0.00	0.00
Resin haf	9.63	0.726890	9.00	0.00%	0.00%	0.00%	0.00	0.00	0.00
Resin neat bulk	8.85	1.129940	9.00	0.00%	0.00%	0.00%	0.00	0.00	0.00
Resin, low styrene, stypol	9.22	2.169200	9.00	0.00%	0.00%	0.00%	0.00	0.00	0.00
Resin unsat poly 22241	9.63	2.076840	9.00	0.00%	0.00%	0.00%	0.00	0.00	0.00
Wax/Release:									
Cleaner Mold Prep	7.05	0.014180	9.00	0.00%	60.00%	40.00%	0.00	2.36	1.58
Release	7.30	0.001370	9.00	1.00%	0.00%	0.00%	0.004	0.00	0.00
TR 112 green edge wax	6.40	0.039060	9.00	0.00%	0.00%	0.00%	0.00	0.00	0.00
TR 301 glaze	8.75	0.011430	9.00	0.00%	0.00%	0.00%	0.00	0.00	0.00
TR 307 fine finish compound	10.25	0.009760	9.00	0.00%	0.00%	0.00%	0.00	0.00	0.00
TR 308 fine finish I	9.00	0.011110	9.00	0.00%	0.00%	0.00%	0.00	0.00	0.00
TR 309 REG rubbing compound	10.25	0.009760	9.00	0.00%	0.00%	0.00%	0.00	0.00	0.00

METHODOLOGY

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

**Appendix A: Emissions Calculations
VOC and Particulate
From Surface Coating Operations**

Company Name: Monaco Coach Corporation, Elkhart
Address City IN Zip: 1722 Mishawaka Road, Elkhart, Indiana 46513-0313
CP: 039-8835
Pt.ID: 00182
Reviewer: Angie Lee
Date: 7-8-98

Door Plant located at the Windsor Plant

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
Black Waterborne Enamel	8.60	18.00%	0.0%	18.0%	0.00%	25.00%	0.25	0.90	1.55	1.55	0.35	8.36	1.53	1.74	6.19	75%
Gloss Black/White Enamel	7.50	83.00%	0.0%	83.0%	0.00%	17.00%	0.10	0.90	6.23	6.23	0.56	13.45	2.45	0.13	36.62	75%
HG Black WB	8.93	25.00%	0.0%	25.0%	0.00%	36.00%	0.10	0.90	2.23	2.23	0.20	4.82	0.88	0.66	6.20	75%
All Purpose Cleaner	7.51	12.00%	0.0%	12.0%	0.00%	88.00%	0.10	0.90	0.90	0.90	0.08	1.95	0.36	0.65	1.02	75%
Adhesive Sikaflex	9.90	9.00%	0.0%	9.0%	0.00%	91.00%	0.15	0.90	0.89	0.89	0.12	2.89	0.53	1.33	0.98	75%
Sealants Caulking Sealant	8.01	27.50%	0.0%	27.5%	0.00%	70.00%	0.15	0.90	2.20	2.20	0.30	7.14	1.30	0.86	3.15	75%

State Potential Emissions

Add worst case coating to all solvents

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