

**CONSTRUCTION PERMIT
OFFICE OF AIR MANAGEMENT**

**Newmar Corporation
1802 Cheyenne Avenue,
Nappanee, Indiana 46550**

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-039-9230-00157	
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 recreational vehicles (RV), motor home manufacturing plant which involves the installation of the chassis, sidewalls, roof, backwall, frontcap and cabinets.

Responsible Official: Mr. Erick Click
Source Address: 1802 Cheyenne Avenue, Nappanee, Indiana 46550
Mailing Address: P. O. Box 30, Nappanee, Indiana 46550
SIC Code: 3716
County Location: Elkhart
County Status: Attainment for all criteria pollutants
Source Status: Part 70 Permit Program
Minor Source, under PSD Rules

A.2 Emission Units and Pollution Control Equipment Summary

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

- (a) Six (6) high volume low pressure (HVLP) spray application in the booth identified as B -1 for coating of interior wood components with a maximum capacity of 2.5 recreational vehicles per hour, with dry filters for the particulate matter overspray control, exhausting to one (1) stack identified as b-1;
- (b) Two (2) high volume low pressure (HVLP) spray application for coating recreational vehicles / motor homes in each downdraft paint booth identified as B-2a and B-2b, each with a maximum capacity of one (1) recreational vehicle per hour, dryfilters for the particulate matter overspray control, each booth exhausting to two separate stacks identified as 2a1, 2a2 and 2b1, 2b2 respectively;
- (c) Two (2) high volume low pressure (HVLP) spray application for coating metal frames in the booth identified as B-3, maximum capacity of 1.875 frames per hour, dry filters for the particulate matter overspray control, exhausting to the stack b-3;
- (d) Three (3) high volume low pressure (HVLP) spray and hand lay up application for coating fiberglass touch up and repair operation in the booth identified as FRP, maximum capacity 0.05 units per hour, dry filters for particulate matter overspray control, exhausting to stack b-4;
- (e) One (1) metal inert gas (MIG) and one (1) stick welding operation consisting of fifty six (56) welding operations rated at a maximum capacity of consuming of 1.05 pound ER 70 S and 0.09 pound E7018 per hour;
- (f) Four (4) natural gas fired air make up units identified as AMU-1 to 3, with a total rated maximum capacity of 6.75 million British thermal units (MMBtu/hr);
- (g) Thirty (30) natural gas fired unit and tube heaters identified as Fab. 1 to 30, with a total rated maximum capacity of 5.10 million British thermal units (MMBtu/hr).

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

This stationary source will be 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).

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 2-1-3.2]

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 No. 6, 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) Permittee shall receive an Operation Permit Validation Letter from the Chief of the Permit Administration & Development Section and attach it to this document.
- (d) The operation permit will be subject to annual operating permit fees pursuant to 326 IAC 2-7-19 (Fees).
- (e) The Permittee has submitted their Part 70 application (T-039-7571-00157) on December 13, 1996. The equipment being reviewed under this permit shall be incorporated in the submitted Part 70 application.

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 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 motor home / recreational vehicles (RV) 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.9 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.10 Availability of Permit [326 IAC 2-1-3(l)]

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

SECTION C

SOURCE OPERATION CONDITIONS



Emission Limitation and Standards

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

- (a) The input VOC of the paint booth identified as B-1, 2a and 2b, B-3 and FRP shall be limited to 229.40 tons per year, rolled on a monthly basis.

During the first 12 months of operation, the input VOC shall be limited such that the total VOC of the paint booth identified as B-1, B- 2_a & 2_b, B-3 and FRP divided by the accumulated months of operation shall not exceed the 19.11 tons per month.

- (b) Any change or modification which may increase potential emissions to 250 tons per twelve (12) consecutive month period, from the equipment covered in this permit, shall require a PSD permit pursuant to 326 IAC 2-2, 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 Open Burning [326 IAC 4-1] [IC 13-17-9]

The Permittee shall not open burn any material except as provided in 326 IAC 4-1-3, 326 IAC 4-1-4 or 326 IAC 4-1-6. The previous sentence notwithstanding, the Permittee may open burn in accordance with an open burning approval issued by the Commissioner under 326 IAC 4-1-4.1. 326 IAC 4-1-3(a)(2)(A) and (B) are not federally enforceable.

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

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

C.5 Fugitive Dust Emissions [326 IAC 6-4]

The Permittee shall not allow fugitive dust to escape beyond the property line or boundaries of the property, right-of-way, or easement on which the source is located, in a manner that would violate 326 IAC 6-4 (Fugitive Dust Emissions). Rule 326 IAC 6-4-2(4) is not federally enforceable.

**C.6 Asbestos Abatement Projects - Accreditation [326 IAC 14-10] [326 IAC 18]
[40 CFR 61, Subpart M]**

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

C.7 Notice of Malfunction [326 IAC 1-6-2]

- (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.

Testing Requirements

C.8 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 before the intended 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.9 Compliance Monitoring

Compliance with applicable requirements shall be documented as required by this permit. The Permittee shall be responsible for installing any necessary equipment and initiating any required

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

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

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

C.10 Monitoring Methods [326 IAC 3]

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

C.11 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
 - (3) Waste disposal site.
- (c) The Permittee shall ensure that the notice is postmarked or delivered according to the guidelines set forth in 326 IAC 14-10-3(2).
- (d) The notice to be submitted shall include the information enumerated in 326 IAC 14-10-3(3).

All required notifications shall be submitted to:

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

- (e) **Procedures for Asbestos Emission Control**
The Permittee shall comply with the emission control procedures in 326 IAC 14-10-4 and 40 CFR 61.145(c). Per 326 IAC 14-10-4 emission control requirements are mandatory for any removal or disturbance of RACM greater than three (3) linear feet on pipes or three (3) square feet on any other facility components or a total of at least 0.75 cubic feet on all facility components.
- (f) **Indiana Accredited Asbestos Inspector**
The Permittee shall comply with 326 IAC 14-10-1(a) that requires the owner or operator, prior to a renovation/demolition, to use an Indiana Accredited Asbestos Inspector to thoroughly inspect the affected portion of the facility for the presence of asbestos. The requirement that the inspector be accredited is federally enforceable.

Corrective Actions and Response Steps

C.12 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. If after this time, the Permittee does not submit an approvable ERP, then IDEM, OAM shall supply such a plan.
- (d) These ERPs shall state those actions that will be taken, when each episode level is declared, to reduce or eliminate emissions of the appropriate air pollutants.
- (e) Said ERPs shall also identify the sources of air pollutants, the approximate amount of reduction of the pollutants, and a brief description of the manner in which the reduction will be achieved.
- (f) Upon direct notification by IDEM, OAM that a specific air pollution episode level is in effect, the Permittee shall immediately put into effect the actions stipulated in the approved ERP for the appropriate episode level. [326 IAC 1-5-3].

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

- (a) The Permittee is required to implement a compliance monitoring plan to ensure that reasonable information is available to evaluate its continuous compliance with applicable requirements. This compliance monitoring plan is comprised of:
- (1) This condition;
 - (2) The Compliance Determination Requirements in Section D of this permit;
 - (3) The Compliance Monitoring Requirements in Section D of this permit;
 - (4) The Record Keeping and Reporting Requirements in Section C (Monitoring Data Availability, General Record Keeping Requirements, and General Reporting Requirements) and in Section D of this permit; and
 - (5) A Compliance Response Plan (CRP) for each compliance monitoring condition of this permit. CRP's shall be submitted to IDEM, OAM upon request and shall be subject to review and approval by IDEM, OAM. The CRP shall be prepared within ninety (90) days after issuance of this permit by the Permittee and maintained on site, and is comprised of :
 - (A) Response steps that will be implemented in the event that compliance related information indicates that a response step is needed pursuant to the requirements of Section D of this permit; and
 - (B) A time schedule for taking such response steps including a schedule for devising additional response steps for situations that may not have been predicted.
- (b) For each compliance monitoring condition of this permit, appropriate response steps shall be taken when indicated by the provisions of that compliance monitoring condition. Failure to perform the actions detailed in the compliance monitoring conditions or failure to take the response steps within the time prescribed in the Compliance Response Plan, shall constitute a violation of the permit unless taking the response steps set forth in the Compliance Response Plan would be unreasonable.
- (c) After investigating the reason for the excursion, the Permittee is excused from taking further response steps for any of the following reasons:
- (1) The monitoring equipment malfunctioned, giving a false reading. This shall be an excuse from taking further response steps providing that prompt action was taken to correct the monitoring equipment.
 - (2) The Permittee has determined that the compliance monitoring parameters established in the permit conditions are technically inappropriate, has previously submitted a request for an administrative amendment to the permit, and such request has not been denied or;
 - (3) An automatic measurement was taken when the process was not operating; or

- (4) The process has already returned to operating within “normal” parameters and no response steps are required.
- (d) Records shall be kept of all instances in which the compliance related information was not met and of all response steps taken. In the event of an emergency, the provisions of 326 IAC 2-7-16 (Emergency Provisions) requiring prompt corrective action to mitigate emissions shall prevail.

C.14 Actions Related to Noncompliance Demonstrated by a Stack Test

- (a) When the results of a stack test performed in conformance with Section C - Performance Testing, of this permit exceed the level specified in any condition of this permit, the Permittee shall take appropriate corrective actions. The Permittee shall submit a description of these corrective actions to IDEM, OAM, within thirty (30) days of receipt of the test results. The Permittee shall take appropriate action to minimize emissions from the affected facility while the corrective actions are being implemented. IDEM, OAM shall notify the Permittee within thirty (30) days, if the corrective actions taken are deficient. The Permittee shall submit a description of additional corrective actions taken to IDEM, OAM within thirty (30) days of receipt of the notice of deficiency. IDEM, OAM reserves the authority to use enforcement activities to resolve noncompliant stack tests.
- (b) A retest to demonstrate compliance shall be performed within one hundred twenty (120) days of receipt of the original test results. Should the Permittee demonstrate to IDEM, OAM that retesting in one-hundred and twenty (120) days is not practicable, IDEM, OAM may extend the retesting deadline. Failure of the second test to demonstrate compliance with the appropriate permit conditions may be grounds for immediate revocation of the permit to operate the affected facility.

Record Keeping and Reporting Requirements

C.15 Annual Emission Reporting [326 IAC 2-6]

That pursuant to 326 IAC 2-6 (Emission Reporting), the Permittee must annually submit an emission statement for the source. This statement must be received by April 15 of each year and must comply with the minimum requirements specified in 326 IAC 2-6-4. The annual statement must be submitted to:

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

The annual emission statement covers the twelve (12) consecutive month time period starting December 1 and ending November 30.

C.16 Monitoring Data Availability

- (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.17 General Record Keeping Requirements

- (a) Records of all required monitoring data and support information shall be retained for a period of at least five (5) years from the date of monitoring sample, measurement, report, or application. These records shall be kept at the source location and available within one (1) hour upon verbal request of an IDEM, OAM, representative, for a minimum of three (3) years. They may be stored elsewhere for the remaining two (2) years providing they are made available within thirty (30) days after written request.
- (b) Records of required monitoring information shall include, where applicable:
 - (1) The date, place, and time of sampling or measurements;
 - (2) The dates analyses were performed;
 - (3) The company or entity performing the analyses;
 - (4) The analytic techniques or methods used;
 - (5) The results of such analyses; and
 - (6) The operating conditions existing at the time of sampling or measurement.
- (c) Support information shall include, where applicable:
 - (1) Copies of all reports required by this permit;
 - (2) All original strip chart recordings for continuous monitoring instrumentation;
 - (3) All calibration and maintenance records;

- (4) Records of preventive maintenance shall be sufficient to demonstrate that improper maintenance did not cause or contribute to a violation of any limitation on emissions or potential to emit. To be relied upon subsequent to any such violation, these records may include, but are not limited to: work orders, parts inventories, and operator's standard operating procedures.
- (d) All record keeping requirements not already legally required shall be implemented within ninety (90) days of permit issuance.

C.18 General Reporting Requirements

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

Indiana Department of Environmental Management
Compliance Data Section, Office of Air Management
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015
- (c) Unless otherwise specified in this permit, any notice, report, or other submission required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAM on or before the date it is due.
- (d) Unless otherwise specified in this permit, any quarterly report shall be submitted within thirty (30) days of the end of the reporting period.
- (e) All instances of deviations must be clearly identified in such reports. A reportable deviation is an exceedance of a permit limitation or a failure to comply with a requirement of the permit or a rule. It does not include:
 - (1) An excursion from compliance monitoring parameters as identified in Section D of this permit unless tied to an applicable rule or limit; or
 - (2) Failure to implement elements of the Preventive Maintenance Plan unless lack of maintenance has caused or contributed to a deviation.
 - (3) Failure to make or record information required by the compliance monitoring provisions of Section D unless such failure exceeds 5% of the required data in any calendar quarter.

A Permittee's failure to take the appropriate response step when an excursion of a compliance monitoring parameter has occurred or failure to monitor or record the required compliance monitoring is a deviation.

- (f) Any corrective actions or response steps taken as a result of each deviation must be clearly identified in such reports.
- (g) The first report shall cover the period commencing on the date of issuance of this permit and ending on the last day of the reporting period.

Stratospheric Ozone Protection

C.19 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 82.16

SECTION D.1 FACILITY CONDITIONS

- (a) Six (6) high volume low pressure (HVLP) spray application in the booth identified as B -1 for coating of interior wood components with a maximum capacity of 2.5 recreational vehicles per hour, with dry filters for the particulate matter overspray control, exhausting to one (1) stack identified as b-1;
- (b) Two (2) high volume low pressure (HVLP) spray application for coating recreational vehicles / motor homes in each downdraft paint booth identified as B-2_a and B-2_b, each with a maximum capacity of one (1) recreational vehicle per hour, dryfilters for the particulate matter overspray control, each booth exhausting to two separate stacks identified as 2_{a1}, 2_{a2} and 2_{b1}, 2_{b2} respectively;
- (c) Two (2) high volume low pressure (HVLP) spray application for coating metal frames in the booth identified as B-3, maximum capacity of 1.875 frames per hour, dry filters for the particulate matter overspray control, exhausting to the stack b-3;
- (d) Three (3) high volume low pressure (HVLP) spray and hand lay up application for coating fiberglass touch up and repair operation in the booth identified as FRP, maximum capacity 0.05 units per hour, dry filters for particulate matter overspray control, exhausting to stack b-4;
- (e) One (1) metal inert gas (MIG) and one (1) stick welding operation consisting of fifty six (56) welding operations rated at a maximum capacity of consuming of 1.05 pound ER 70 S and 0.09 pound E7018 per hour;
- (f) Four (4) natural gas fired air make up units identified as AMU-1 to 3, with a total rated maximum capacity of 6.75 million British thermal units (MMBtu/hr);
- (g) Thirty (30) natural gas fired unit and tube heaters identified as Fab. 1 to 30, with a total rated maximum capacity of 5.10 million British thermal units (MMBtu/hr).

Emissions Limitation and Standards

D.1.1 Volatile Organic Compounds (Miscellaneous Metal Coatings) [326 IAC 8-2-9]

Pursuant to 326 IAC 8-2-9 (Miscellaneous Metal Coating Operations),

- (a) the volatile organic compound (VOC) content of coatings applied to metal frames in the paint booth identified as B-3 shall be limited to:

Coatings	Limit (pounds of VOC/gallon of coating less water delivered to the applicator)
Extreme Performance Coat	3.50

- (b) solvent sprayed from the application equipment during clean up or color changes shall be directed into containers. Such containers shall be closed as soon as such solvent

spraying is complete, and the waste solvent shall be disposed of in such a manner that evaporation is minimized.

D.1.2 Volatile Organic Compounds (Wood Furniture and Cabinet Coating) [326 IAC 8-2-12]

- (a) Pursuant to 326 IAC 8-2-12 (Wood Furniture and Cabinet coating), the surface coatings applied to wood furniture and/or wood components in paint booth identified as B-1 shall utilize one or more of the following application methods:

Airless Spray Application	Air-Assisted Airless Spray Application
Electrostatic Spray Application	Electrostatic Bell or Disc Application
Heated Airless Spray Application	Roller Coating
Brush or Wipe Application	Dip-and-Drain Application
High Volume Low Pressure HVLP	Aerosol Spray Cans

- (b) High volume low pressure spray is an acceptable alternative application of air-assisted airless spray. High volume low pressure (HVLP) spray means technology used to apply coating to a substrate by means of coating application equipment which operates between one-tenth (0.1) and ten (10) pounds per square inch gauge (psig) air pressure measured dynamically at the center of the air cap and at the air horns of the spray system.

D.1.3 Volatile Hazardous Air Pollutant (VHAP) [326 IAC 14] [40 CFR Part 63.802][40 CFR Subpart JJ]

Pursuant to 40 CFR 63, Subpart JJ (National Emission Standards for Wood Furniture Manufacturing Operations):

- (a) the volatile organic hazardous air pollutant (VHAP) emissions from wood furniture and / or wood component surface coating operations in the paint booth identified as B-1 shall be limited to:

Coatings	Limit (lb. of VHAP / lb. of solid applied)
weighted average VHAP content all coatings	0.8
stains	1.0
wash coats, sealers, topcoats, base coats, and enamels	0.8
thinners (maximum % allowable)	10.0
strippable spray booth coating (clean-up)	0.80
contact adhesive (excluding aerosol adhesive and contact adhesive applied to nonporous substrates)	0.2

Where VHAP is defined as any hazardous air pollutant listed in Table 2 Subpart JJ.

- (b) The wood furniture coating operation is subject to the National Emission Standards for Hazardous Air Pollutants (NESHAP), 326 IAC 20-14, (40 CFR 63, Subpart JJ), with a compliance date of upon startup.

D.1.4 BACT Determination [326 IAC 8-1-6]

Pursuant to the requirements of 326 IAC 8-1-6,

- (a) The input VOC of the coatings (primer, base, top and clear coats, cleaning solvents) in the paint booths identified as B-2, B- 2_a and 2_b shall be limited to 70 tons of VOC emissions per year, rolled on a monthly basis.

D.1.5 PM process operation (326 IAC 6-3):

Pursuant to 326 IAC 6-3 (Process Operations), the following facilities shall have a PM allowable emissions using the following equation:

$$E = 4.10 P^{0.67}$$

Where: E = PM allowable emissions in pounds hour

P = Process weight rate in tons per hour

Facility/Operation	Process Weight Rate (ton/hr)	PM Allowable Emissions (lb/hr)
Welding Operation	0.0825	0.338
Paint Booth, B-1		$E = 4.10 P^{0.67}$
Paint Booths, B-2a and 2b		$E = 4.10 P^{0.67}$
Paint Booth, B-3		$E = 4.10 P^{0.67}$
Paint Booth, FRP		$E = 4.10 P^{0.67}$

D.1.6 Work Practice Standards [326 IAC 14] [40 CFR Part 63.803]

Pursuant 326 IAC 14 & 40 CFR 63, Subpart JJ (National Emission Standards for Wood Furniture Manufacturing Operations):

- (a) The owner or operator of the paint booth identified as B-1 subject to this subpart shall prepare and maintain a written work practice implementation plan that defines environmentally desirable work practices for each wood furniture manufacturing operation and addresses each of the work practice standards presented in paragraphs (b) through (l) of this section. The plan shall be developed no more than 60 days after the issuance date of this permit. The written work practice implementation plan shall be available for inspection by the EPA and IDEM upon request. If the EPA and IDEM determines that the work practice implementation plan does not adequately address each of the topics specified in paragraphs (b) through (l) of this section or that the plan does not include sufficient mechanisms for ensuring that the work practice standards are being implemented, the EPA and IDEM may require the affected source to modify the plan. Revisions or modifications to the plan do not require a revision of the source's Title V permit.
- (b) The owner or operator of the paint booth identified as B-1 shall train all new and existing personnel, including contract personnel, who are involved in finishing, gluing, cleaning, and washoff operations, use of manufacturing equipment, or implementation of the requirements of this subpart. All new personnel, those hired after the compliance date of the standard, shall be trained upon hiring. All existing personnel, those hired before the compliance date

of the standard, shall be trained within six months of the compliance date of the standard. All personnel shall be given refresher training annually. The owner or operator of a paint booth identified as B-1 shall maintain a copy of the training program with the work practice implementation plan. The training program shall include, at a minimum, the following:

- (1) A list of all current personnel by name and job description that are required to be trained;
 - (2) An outline of the subjects to be covered in the initial and refresher training for each position or group of personnel;
 - (3) Lesson plans for courses to be given at the initial and the annual refresher training that include, at a minimum, appropriate application techniques, appropriate cleaning and washoff procedures, appropriate equipment setup and adjustment to minimize finishing material usage and overspray, and appropriate management of cleanup wastes; and
 - (4) A description of the methods to be used at the completion of initial or refresher training to demonstrate and document successful completion.
- (c) The owner or operator of the paint booth identified as B-1 shall prepare and maintain with the work practice implementation plan a written leak inspection and maintenance plan that specifies:
- (1) A minimum visual inspection frequency of once per month or all equipment used to transfer or apply coatings, adhesives, or organic solvents;
 - (2) An inspection schedule;
 - (3) Methods for documenting the date and results of each inspection and any repairs that were made;
 - (4) The time frame between identifying the leak and making the repair, which adheres, at a minimum, to the following schedule:
 - (i) A first attempt at repair (e.g., tightening of packing glands) shall be made no later than five calendar days after the leak is detected; and
 - (ii) Final repairs shall be made within 15 calendar days after the leak is detected, unless the leaking equipment is to be replaced by a new purchase, in which case repairs shall be completed within three months.
- (d) The owner or operator of the paint booth identified as B-1 shall develop an organic solvent accounting form to record:
- (1) The quantity and type of organic solvent used each month for washoff and cleaning, as defined in § 63.801 of this subpart;
 - (2) The number of pieces washed off, and the reason for the washoff; and
 - (3) The quantity of spent solvent generated from each washoff and cleaning operation each month, and whether it is recycled onsite or disposed offsite.
- (e) The owner or operator of the paint booth identified as B-1 shall not use cleaning or washoff solvents that contain any of the pollutants listed in Table 4 to this subpart, in concentrations subject to MSDS reporting as required by OSHA.

- (f) The owner or operator of the paint booth identified as B-1 shall not use compounds containing more than 8.0 percent by weight of VOC for cleaning spray booth components other than conveyors, continuous coaters and their enclosures, or metal filters, unless the spray booth is being refurbished. If the spray booth is being refurbished, that is the spray booth coating or other protective material used to cover the booth is being replaced, the paint booth identified as B-1 shall use no more than 1.0 gallon of organic solvent per booth to prepare the surface of the booth prior to applying the booth coating.
- (g) The owner or operator of the paint booth identified as B-1 shall use normally closed containers for storing finishing, gluing, cleaning, and washoff materials.
- (h) The owner or operator of the paint booth identified as B-1 shall use conventional air spray guns to apply finishing materials only under any of the following circumstances:
 - (1) To apply finishing materials that have a VOC content no greater than 1.0 lb VOC/lb solids, as applied;
 - (2) For touch up and repair under the following conditions:
 - (i) The touch up and repair occurs after completion of the finishing operation; or
 - (ii) The touch up and repair occurs after the application of stain and before the application of any other type of finishing material, and the materials used for touch up and repair are applied from a container that has a volume of no more than 2.0 gallons.
 - (3) When spray is automated, that is, the spray gun is aimed and triggered automatically, not manually;
 - (4) When emissions from the finishing application station are directed to a control device;
 - (5) The conventional air gun is used to apply finishing materials and the cumulative total usage of that finishing material is no more than 5.0 percent of the total gallons of finishing material used during that semiannual period; or
 - (6) The conventional air gun is used to apply stain on a part for which it is technically or economically infeasible to use any other spray application technology. The owner or operator of a paint booth identified as B-1 shall demonstrate technical or economic infeasibility by submitting to the EPA and IDEM a videotape, a technical report, or other documentation that supports the facility's claim of technical or economic infeasibility. The following criteria shall be used, either independently or in combination, to support the owner or operator of paint booth identified as B-1's claim of technical or economic infeasibility:
 - (i) The production speed is too high or the part shape is too complex for one operator to coat the part and the application station is not large enough to accommodate an additional operator; or
 - (ii) The excessively large vertical spray area of the part makes it difficult to avoid sagging or runs in the stain.
- (i) The owner or operator of a paint booth identified as B-1 shall pump or drain all organic solvent used for line cleaning into a normally closed container.

- (j) The owner or operator of a paint booth identified as B-1 shall collect all organic solvent used to clean spray guns into a normally closed container.
- (k) The owner or operator of a paint booth identified as B-1 shall control emissions from washoff operations by:
 - (1) Using normally closed tanks for washoff; and
 - (2) Minimizing dripping by tilting or rotating the part to drain as much solvent as possible.
- (l) The owner or operator of a paint booth identified as B-1 shall prepare and maintain with the work practice implementation plan a formulation assessment plan that:
 - (1) Identifies VHAP from the list presented in Table 5 of the 40 CFR 63 Part JJ that are being used in finishing operations by the facility;
 - (2) Establishes a baseline level of usage by the paint booth identified as B-1, for each VHAP identified in paragraph h (l)(1) of this section. The baseline usage level shall be the highest annual usage from 1994, 1995, or 1996, for each VHAP identified in paragraph (l)(1) of this section. For formaldehyde, the baseline level of usage shall be based on the amount of free formaldehyde present in the finishing material when it is applied. For styrene, the baseline level of usage shall be an estimate of unreacted styrene, which shall be calculated by multiplying the amount of styrene monomer in the finishing material, when it is applied, by a factor of 0.16. Sources using a control device to reduce emissions may adjust their usage based on the overall control efficiency of the control system, which is determined using the equation in § 63.805 (d) or (e).
 - (3) Tracks the annual usage of each VHAP identified in (l)(1) by the paint booth that is present in amounts subject to MSDS reporting as required by OSHA.
 - (4) If, after November 1998, the annual usage of the VHAP identified in paragraph (l)(1) exceeds its baseline level, then the owner or operator of the paint booth identified as B-1 shall provide a written notification to the permitting authority that describes the amount of the increase and explains the reasons for exceedance of the baseline level. The following explanations would relieve the owner or operator from further action, unless the facility is not in compliance with any State regulations or requirements for that VHAP:
 - (i) The exceedance is no more than 15.0 percent above the baseline level;
 - (ii) Usage of the VHAP is below the de minimis level presented in Table 5 of 40 CFR 63 Part JJ subpart for that VHAP (sources using a control device to reduce emissions may adjust their usage based on the overall control efficiency of the control system, which is determined using the procedures in § 63.805 (d) or (e);
 - (iii) The paint booth identified as B-1 is in compliance with its State's air toxic regulations or guidelines for the VHAP; or
 - (iv) The source of the pollutant is a finishing material with a VOC content of no more than 1.0 kg VOC/kg solids (1.0 lb VOC/lb solids), as applied.
 - (5) If none of the above explanations are the reason for the increase, the owner or operator shall confer with the permitting authority to discuss the reason for the increase and whether there are practical and reasonable technology-based solutions

for reducing the usage. The evaluation of whether a technology is reasonable and practical shall be based on cost, quality, and marketability of the product, whether the technology is being used successfully by other wood furniture manufacturing operations, or other criteria mutually agreed upon by the permitting authority and owner or operator. If there are no practical and reasonable solutions, the source need take no further action. If there are solutions, the owner or operator shall develop a plan to reduce usage of the pollutant to the extent feasible. The plan shall address the approach to be used to reduce emissions, a timetable for implementing the plan, and a schedule for submitting notification of progress.

- (6) If after November 1998, an affected source uses a VHAP of potential concern for which a baseline level has not been previously established, then the baseline level shall be established as the de minimis level, based on 70 year exposure levels and data provided in the proposed rulemaking pursuant to Section 112(g) of the CAA, for that pollutant. A list of VHAP of potential concern is provided in Table 6 of 40 CFR 63 Part JJ. If usage of the VHAP of potential concern exceeds the de minimis level, then the source shall provide an explanation to the permitting authority that documents the reason for exceedance of the de minimis level. If the explanation is not one of those listed in paragraphs (l)(4)(i) through (l)(4)(iv), the source shall follow the procedures established in (l)(5).

Compliance Determination Requirements

D.1.7 Volatile Organic Compounds

Compliance with the VOC content and usage limitations contained in Conditions D.1.1 shall be determined pursuant to 326 IAC 8-1-4(a)(3)(A) and 326 8-1-2 (a) (7) using formulation data supplied by the coating 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.1.8 Performance Test Methods [326 IAC 14][40 CFR Part 63.805]

- (a) The EPA Method 311 of Appendix A of part 63 shall be used in conjunction with formulation data to determine the VHAP content of the liquid coating in the paint booth identified as B-1. Formulation data shall be used to identify VHAP present in the coating. The EPA Method 311 shall then be used to quantify those VHAP identified through formulation data. The EPA Method 311 shall not be used to quantify HAP such as styrene and formaldehyde that are emitted during the cure.
- (b) The EPA Method 24 (40 CFR part 60, Appendix A) shall be used to determine the solids content by weight and the density of coatings in the paint booth identified as B-1. If it is demonstrated to the satisfaction of the EPA and IDEM that a coating does not release VOC or HAP byproducts during the cure, for example, all VOC and HAP present in the coating is solvent, then batch formulation information shall be accepted.
- (c) The owner or operator of the paint booth identified as B-1 may request approval from the EPA and IDEM to use an alternative method for determining the VHAP content of the coating.
- (d) In the event of any inconsistency between the EPA Method 24 or Method 311 test data and a facility identified as B-1 formulation data, that is, if the EPA Method 24/311 value is

higher, the EPA Method 24/311 test shall govern unless after consultation, a regulated source could demonstrate to the satisfaction of the enforcement agency that the formulation data were correct. Sampling procedures shall follow the guidelines presented in "Standard Procedures for Collection of Coating and Ink Samples for VOC Content Analysis by Reference Method 24 and Reference Method 24A," EPA-340/1-91-010. (Docket No. A-93-10, Item No. IV-A-1).

D.1.9 Testing Requirements

Testing of the facilities identified as B- 2_a & 2_b are not specifically required by this permit. However, if testing is required, compliance with the VOC limit specified in Condition D.1.4 shall be determined by a performance test conducted in accordance with Section C - Performance Testing.

Compliance Monitoring Requirements

D.1.10 Particulate Matter (PM)

The dry filters for particulate matter overspray control shall at all times be in placed when paint booths identified as B-1, B- 2_a & 2_b, B-3 and FRP are in operation.

D.1.11 Monitoring

- (a) Daily inspections shall be performed to verify the placement, integrity and particle loading of the dry filters. To monitor the performance of the dry filters, daily observations shall be made of the overspray while the booths identified as B-1, B- 2_a & 2_b, B-3 and FRP 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 stacks 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.1.12 Compliance Procedures and Monitoring Requirements [326 IAC 14] [40 CFR Part 63.804]

- (a) The owner or operator of the paint booth identified as B-1 shall comply with the Condition D.1.3 provisions by using the following methods:
 - (1) Use compliant finishing materials according to the following criteria:
 - (i) Demonstrate that each sealer and topcoat has a VHAP content of no more than 0.8 kg VHAP/kg solids (0.8 lb VHAP/lb solids), as applied, each stain has a VHAP content of no more than 1.0 kg VHAP/kg solids

- (1.0 lb VHAP/lb solids), as applied, and each thinner contains no more than 10.0 percent VHAP by weight;
- (ii) Demonstrate that each washcoat, base coat, and enamel that is purchased pre-made, that is, it is not formulated onsite by thinning another finishing material, has a VHAP content of no more than 0.8 kg VHAP/kg solids (0.8 lb VHAP/lb solids), as applied, and each thinner contains no more than 10.0 percent VHAP by weight; and
 - (iii) Demonstrate that each wash coat, base coat, and enamel that is formulated onsite is formulated using a finishing material containing no more than 0.8 kg VHAP/kg solids (0.8 lb VHAP/lb solids) and a thinner containing no more than 3.0 percent HAP by weight.
- (b) The owner or operator of the paint booth identified as B-1 that are complying through the procedures established (a)(1) and are applying coatings using continuous coaters shall demonstrate initial compliance by:
- (1) Submitting an initial compliance status report, as required by § 63.807(b), stating that compliant coatings, as determined by the VHAP content of the coating in the reservoir and the VHAP content as calculated from records, and compliant thinners are being used; or
 - (2) Submitting an initial compliance status report, as required by § 63.807(b), stating that compliant coatings, as determined by the VHAP content of the coating in the reservoir, are being used; the viscosity of the coating in the reservoir is being monitored; and compliant thinners are being used. The affected source shall also submit data that demonstrate that viscosity is an appropriate parameter for demonstrating compliance.
- (c) The owner or operator of the paint booth in Condition D.1.3, shall submit an initial compliance status report, as required by § 63.807(b), stating that the work practice implementation plan has been developed and procedures have been established for implementing the provisions of the plan.
- (d) The owner or operator of the paint booth that is complying through the procedures established in § 63.804 (d)(2) and are applying coatings using continuous coaters shall demonstrate continuous compliance by following the procedures:
- (1) Using compliant coatings, as determined by the VHAP content of the coating in the reservoir and the VHAP content as calculated from records, using compliant thinners, and submitting a compliance certification with the semiannual report required by § 63.807(c).
 - (2) The compliance certification shall state that compliant coatings have been used each day in the semiannual reporting period, or should otherwise identify the days of noncompliance and the reasons for noncompliance. The paint booth identified as B-1 is in violation of the standard whenever a noncompliant coating, as determined by records or by a sample of the coating, is used. Use of a noncompliant coating is a separate violation for each day the noncompliant coating is used.
 - (3) The compliance certification shall be signed by a responsible official of the company that owns or operates the paint booth identified as B-1.

Record Keeping and Reporting Requirements

D.1.13 Record Keeping Requirements [326 IAC 14][40 CFR Part 63.806]

- (a) To document compliance with Conditions D.1.1 and D.1.4, the Permittee shall maintain records in accordance with (1) through (6) below. Records maintained for (1) through (7) shall be taken daily and monthly and shall be complete and sufficient to establish compliance with the VOC usage limits and/or the VOC emission limits established in Conditions D.1.1 and D.1.4.
- (1) The amount of VOC and HAP 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 calendar day;
 - (4) The cleanup solvent usage for each month;
 - (5) The total VOC usage for each calendar day and month;
 - (6) The total HAP usage for each month; and
 - (7) The weight of VOC and HAPs emitted for each compliance period.
- (b) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.
- (c) The owner or operator of the paint booth identified as B-1 shall fulfill all record keeping requirements of § 63.10 of subpart A, according to the applicability criteria in § 63.800(d) of this subpart.
- (d) The owner or operator of the paint booth identified as B-1 subject to the emission limits in Condition D.1.3 of this permit shall maintain records of the following:
- (1) A certified product data sheet for each finishing material, thinner, contact adhesive, and strippable spray booth coating subject to the emission limits in § 63.802; and
 - (2) The VHAP content, in kg VHAP/kg solids (lb VHAP/lb solids), as applied, of each finishing material and contact adhesive subject to the emission limits in § 63.802; and
 - (3) The VOC content, in kg VOC/kg solids (lb VOC/lb solids), as applied, of each strippable booth coating subject to the emission limits in § 63.802 (b)(3).
- (e) The owner or operator of the paint booth identified as B-1 shall maintain onsite the work practice implementation plan and all records associated with fulfilling the requirements of that plan, including, but not limited to:

- (1) Records demonstrating that the operator training program required by § 63.803(b) is in place;
 - (2) Records collected in accordance with the inspection and maintenance plan required by § 63.803(c);
 - (3) Records associated with the cleaning solvent accounting system required by § 63.803(d);
 - (4) Records associated with the limitation on the use of conventional air spray guns showing total finishing material usage and the percentage of finishing materials applied with conventional air spray guns for each semiannual period as required by § 63.803(h)(5).
 - (5) Records associated with the formulation assessment plan required by § 63.803(l); and
 - (6) Copies of documentation such as logs developed to demonstrate that the other provisions of the work practice implementation plan are followed.
- (f) The owner or operator of the paint booth identified as B-1 subject to the emission limits in D.1.3 and following the compliance provisions of § 63.804(f) (3), and § 63.804(g)(3)(i), shall maintain records of the compliance certifications submitted in accordance with § 63.807(c) for each semiannual period following the compliance date.
- (g) The owner or operator of the paint booth identified as B-1 shall maintain records of all other information submitted with the compliance status report required by § 63.9(h) and § 63.807(b) and the semiannual reports required by § 63.807(c).
- (h) The owner or operator of the paint booth identified as B-1 shall maintain all records in accordance with the requirements of § 63.10(b)(1).

D.1.14 Reporting Requirements [326 IAC 14] [40 CFR Part 63.807]

- (a) A quarterly summary of the information to document compliance with Condition C.1, shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported.
- (b) The owner or operator of the paint booth identified as B-1 subject to this subpart shall fulfill all reporting requirements of § 63.7 through § 63.10 of subpart A (General Provisions) according to the applicability criteria in § 63.800(d) of this subpart.
- (c) The owner or operator of the paint booth identified as B-1 demonstrating compliance in accordance with § 63.804(f) (3) shall submit the compliance status report required by § 63.9(h) of subpart A (General Provisions) no later than 60 days after the compliance date. The report shall include the information required by § 63.804(f) (3) of this subpart and submitted to the address listed in Section C - General Reporting Requirements, of this permit.
- (d) The owner or operator of the paint booth identified as B-1 demonstrating compliance in accordance with § 63.804(g) (3) shall submit a report covering the previous 6 months of wood furniture manufacturing operations:

- (1) The first report shall be submitted 30 calendar days after the end of the first 6-month period following the compliance date.
- (2) Subsequent reports shall be submitted 30 calendar days after the end of each 6-month period following the first report.
- (3) The semiannual reports shall include the information required by § 63.804(g) (3), a statement of whether the affected source was in compliance or noncompliance, and, if the affected source was in noncompliance, the measures taken to bring the affected source into compliance.
- (4) The frequency of the reports required by paragraph (c) of this section shall not be reduced from semiannually regardless of the history of the owner's or operator's compliance status.

The report shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit.

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

Quarterly Report

Source Name: Newmar Corporation
Source Address: 1802 Cheyenne Avenue, Nappanee, Indiana 46550
Mailing Address: P. O. Box 30, Nappanee, Indiana 46550
Construction Permit No.: CP039-9230-00157
Facility: Paint Booths (B-2, B- 2_a & 2_b, 2a and 2b), Paint Booth 1, Paint Booth 3, Paint Booth FRP
Parameter: VOC
Limit: 229.40 tons per year, based on the monthly rolling average

Year: _____

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

Submitted by: _____

Title/Position: _____

Signature: _____

Date: _____

MALFUNCTION REPORT

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR MANAGEMENT
FAX NUMBER - 317 233-5967**

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

THIS FACILITY MEETS THE APPLICABILITY REQUIREMENTS BECAUSE: IT HAS POTENTIAL TO EMIT 25 LBS/HR PARTICULATES ? _____, 100 LBS/HR VOC ? _____, 100 LBS/HR SULFUR DIOXIDE ? _____ OR 2000 LBS/HR OF ANY OTHER POLLUTANT ? _____ EMISSIONS FROM MALFUNCTIONING CONTROL EQUIPMENT OR PROCESS EQUIPMENT CAUSED EMISSIONS IN EXCESS OF APPLICABLE LIMITATION _____.

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

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

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

COMPANY: Newmar Corporation PHONE NO. (219) 773 - 7791

LOCATION: (CITY AND COUNTY) Nappanee / Elkhart
PERMIT NO. 039-9230 AFS PLANT ID: 039-00157 AFS POINT ID: _____ INSP: _____
CONTROL/PROCESS DEVICE WHICH MALFUNCTIONED AND REASON: _____

DATE/TIME MALFUNCTION STARTED: ____/____/19____ AM / PM

ESTIMATED HOURS OF OPERATION WITH MALFUNCTION CONDITION:

DATE/TIME CONTROL EQUIPMENT BACK-IN SERVICE ____/____/19____ AM/PM

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

ESTIMATED AMOUNT OF POLLUTANT EMITTED DURING MALFUNCTION: _____

MEASURES TAKEN TO MINIMIZE EMISSIONS: _____

REASONS WHY FACILITY CANNOT BE SHUTDOWN DURING REPAIRS:

CONTINUED OPERATION REQUIRED TO PROVIDE ESSENTIAL* SERVICES: _____
CONTINUED OPERATION NECESSARY TO PREVENT INJURY TO PERSONS: _____
CONTINUED OPERATION NECESSARY TO PREVENT SEVERE DAMAGE TO EQUIPMENT: _____
INTERIM CONTROL MEASURES: (IF APPLICABLE) _____

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

MALFUNCTION RECORDED BY: _____ DATE: _____ TIME: _____

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

Technical Support Document (TSD) for New Construction and Operation

Source Background and Description

Source Name: Newmar Corporation
Source Location: 1802 Cheyenne Avenue, Nappanee, Indiana 46550
County: Elkhart
Construction Permit No.: CP-039-9230-00157
SIC Code: 3716
Permit Reviewer: Manoj P. Patel

The Office of Air Management (OAM) has reviewed an application from Newmar Corporation relating to the construction and operation of a recreational vehicles (RV) manufacturing operation which involves the installation of the chassis, sidewalls, roof, back wall, frontcap and cabinets, consisting of the following equipment:

- (a) Six (6) high volume low pressure (HVLP) spray application in the booth identified as B -1 for coating of interior wood components with a maximum capacity of 2.5 recreational vehicles per hour, with dry filters for the particulate matter overspray control, exhausting to one (1) stack identified as b-1;
- (b) Two (2) high volume low pressure (HVLP) spray application for coating recreational vehicles / motor homes in each downdraft paint booth identified as B-2a and B-2b, each with a maximum capacity of one (1) recreational vehicle per hour, dry filters for the particulate matter overspray control, each booth exhausting to two (2) separate stacks identified as 2a1, 2a2 and 2b1, 2b2 respectively;
- (c) Two (2) high volume low pressure (HVLP) spray application for coating metal frames in the booth identified as B-3, maximum capacity of 1.875 frames per hour, dry filters for the particulate matter overspray control, exhausting to the stack b-3;
- (d) Three (3) high volume low pressure (HVLP) spray and hand lay up application for coating fiberglass touch up and repair operation in the booth identified as FRP, maximum capacity 0.05 units per hour, dry filters for particulate matter overspray control, exhausting to stack b-4;
- (e) One (1) metal inert gas (MIG) and one (1) stick welding operation consisting of fifty-six (56) welding operations rated at a maximum capacity of consuming of 1.05 pound ER 70 S and 0.09 pound E7018 per hour;
- (f) Four (4) natural gas fired air make up units identified as AMU-1 to 3, with a total rated maximum capacity of 6.75 million British thermal units (mmBtu/hr);
- (g) Thirty (30) natural gas fired unit and tube heaters identified as Fab. 1 to 30, with a total rated maximum capacity of 5.10 million British thermal units (MMBTU/hr).

Source Definition

This recreational vehicle (RV) manufacturing company consists of two (2) plants:

- (a) Plant 1 (existing) is located at 355 North Delaware Street, Nappanee, Indiana; and
- (b) Plant 2 (new) is located at 1802 Cheyenne Avenue, Nappanee, Indiana.

Since the two (2) plants are located in contiguous properties, have the same SIC codes and owned by one company, they will be considered as one (1) source.

Stack Summary

Stack ID	Operation	Height (feet)	Diameter (feet)	Flow Rate (acfm)	Temperature (°F)
B-1	Booth 1	18	1.5	4,040	ambient
B-2a ₁	Booth 2a	25	2.83	14,000	ambient
B-2a ₂	Booth 2a	25	2.83	14,000	ambient
B-2b ₁	Booth 2b	25	2.83	14,000	ambient
B-2b ₂	Booth 2b	25	2.83	14,000	ambient
B-3	Booth 3	18	2.00	7,945	ambient
B-4	Booth FRP	23	2.5	29,150	ambient

Enforcement Issue

There is no enforcement issue pending with the source.

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 24, 1997, with additional information received on December 29, 1997, February 26, 1998 and March 2 & 5, 1998.

Emissions Calculations

- (A) Air Make Up Units:

See appendix A of TSD for the detailed emission calculation from the air make units.

- (B) Unit and Tube Heaters:

See appendix B of TSD for the detailed emission calculations from the unit and tube heaters.

(C) Welding Operations:

See appendix C of TSD for the detailed emission calculations from the welding operations.

(D) Booth 1 :

See appendix D and H of TSD for the detailed emission calculations from the booth 1.

(E) Booth 2a and 2b:

See appendix E and I of TSD for the detailed emission calculations from the Booth 2_a & 2_b.

(F) Booth 3:

See Appendix F and J of TSD for the detailed emissions calculations from the Booth 3.

(G) FRP Booth:

See Appendix G, K and L of TSD for the detailed emission calculations from the FRP Booth.

Summary of Emissions:

Facility Description	Emissions in tons per year						
	PM / PM ₁₀	VOC	NO _x	SO ₂	CO	Single HAP	Combination HAPs
Air Make-up Units	0.40	0.20	3.0	0.02	0.60	0.0	0.0
Unit and Tube Heaters	0.30	0.10	2.20	0.01	0.50	0.0	0.0
Welding Operations	1.15	0.0	0.0	0.0	0.0	0.0	0.70*
Booth 1	7.50	115.0	0.0	0.0	0.0	7.80	18.90
Booth 2a and 2b	39.45	137.10	0.0	0.0	0.0	10.05	31.25
Booth 3	27.45	25.20	0.0	0.0	0.0	4.90	9.70
FRP Booth	9.30	5.40	0.0	0.0	0.0	2.60	2.60
Total Uncontrolled Emissions	85.55	283.0	5.20	0.03	1.10	25.35	63.15
Total Controlled Emissions	6.15	229.40	5.20	0.03	1.10	25.35	63.15

* - chromium, cobalt, manganese, nickel emissions

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)	224.43	85.55
Particulate Matter (PM10)	224.43	85.55
Sulfur Dioxide (SO ₂)	0.03	0.03
Volatile Organic Compounds (VOC)	283	283
Carbon Monoxide (CO)	1.10	1.10
Nitrogen Oxides (NO _x)	5.20	5.20
Single Hazardous Air Pollutant (HAP)	25.35	25.35
Combination of HAPs	63.15	63.15

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

(1) Welding Operations (P = 0.0825 ton / hour)

$$E = 4.10 P^{0.67} \quad \text{where } E = \text{rate of emission in lbs/hr and } P = \text{process weight in tons/hr}$$

$$\begin{aligned} E &= 4.10 (0.024)^{0.67} \\ &= 4.10 (0.0825) \\ &= 0.338 \text{ lbs/hr} \\ &= 1.48 \text{ tons/yr} \end{aligned}$$

(2) Paint Booth 1, 2a & 2b, 3 and FRP:

$$E = 4.10 P^{0.67} \quad \text{where } E = \text{rate of emission in lbs/hr and } P = \text{process weight in tons/hr}$$

Paint Booths identified as B-1, B-2a & 2b, B-3, FRP comply using the dry filters as control.

- (b) The potential emissions before control are less than the allowable emissions, therefore, the potential emissions before control are used for the permitting determination.
- (c) Allowable emissions (as defined in the Indiana Rule) of volatile organic compounds (VOC) and particulate matter (PM) 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) and oxides of nitrogen (NOx) are precursors for the formation of ozone. Therefore, VOC emissions are considered when evaluating the rule applicability relating to the ozone standards. Elkhart County has been designated as attainment or unclassifiable for ozone. Therefore, VOC and NOx emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.
- (b) Elkhart County has been classified as attainment or unclassifiable for all other criteria pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.

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	30.90
PM10	30.90
SO ₂	0.10
VOC	210.60
CO	3.10
NO _x	9.60

- (a) This existing source is **not** a major stationary source because no attainment regulated pollutant is emitted at a rate of 250 tons per year or more, and it is not in one of the 28 listed source categories.
- (b) These emissions were based on the construction permit (CP# 039-4795-00157) issued the source on March 25, 1996.

Proposed Modification

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

Pollutant	PM (ton/yr)	PM10 (ton/yr)	SO ₂ (ton/yr)	VOC (ton/yr)	CO (ton/yr)	NO _x (ton/yr)
Proposed Modification	6.15	6.15	0.03	229.50	1.10	5.20
PSD Threshold Level	250	250	250	250	250	250

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

Part 70 Permit Determination

326 IAC 2-7 (Part 70 Permit Program)

This existing source has submitted their Part 70 (T-039-7571-00157) application on December 13, 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) The National Emission Standards for Hazardous Air Pollutants (NESHAP) 40 CFR Part 63 Subpart JJ, (National Emission Standards for Wood Furniture Manufacturing Operations) is applicable to this facility identified as Booth -1, because this source is a major source as defined in 40 CFR Part 63.2 and it assembles objects made of solid wood and then applies various stains, sealers, lacquers, adhesives, enamels, and sealants to the wood. These operations meet the wood furniture and wood furniture component definitions in 40 CFR Part 63.801 since they qualify as “any product made of wood” or “any part that is used in the manufacturer of wood furniture”, respectively. It does not meet the definition of incidental wood furniture since it uses more than 100 gallons per month of finishing material and adhesives. Further, the source does not qualify as an area source as specified in 40 CFR Part 63.800 (b1), (b2), or (b3). Since the source does not qualify as either an incidental wood furniture manufacturer or area source, the wood furniture and wood furniture component manufacturing and surface coating operations at Newmar Corp. are therefore subject to the requirements of 40 CFR Part 63.808, Subpart JJ” National Emissions Standards for Wood Furniture Manufacturing Operations.

Pursuant to 40 CFR Part 63.802 the volatile hazardous air pollutant (VHAP) emissions from wood furniture and / or wood component surface coating operations shall be limited to:

Coatings	Limit (lb. of VHAP / lb. of solid applied)
weighted average VHAP content all coatings	0.8
stains	1.0
wash coats, sealers, topcoats, base coats, and enamels	0.8
thinners (maximum % allowable)	10.0
strippable spray booth coating (clean-up)	0.80
contact adhesive (excluding aerosol adhesive and contact adhesive applied to nonporous substrates)	0.2

Where VHAP is defined as any hazardous air pollutant listed in Table 2 Subpart JJ.

Pursuant to 40 CFR Part 63.800 (f), these new affected facilities shall be in compliance with these emission limits and all requirements under 40 CFR Part 63.800 through 63.808, Subpart JJ immediately upon startup.

Further, pursuant to 40 CFR Part 63.800 through 63.808, the source owner / operator shall prepare and maintain a written work practice implementation plan that define environmentally desirable work practices in accordance with 40 CFR Part 63.803(b) through (l) within 60 days after the compliance date. The source owner /operator shall also comply with all record keeping and reporting requirements as specified in 40 CFR Part 63.806 and 40 CFR Part 63.807.

State Rule Applicability

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 (located in Elkhart County) of VOC. Pursuant to this rule, the owner/operator of this facility must annually submit an emission statement of the facility. The annual statement must be received by April 15 of each year and must contain the minimum requirements as specified in 326 IAC 2-6-4.

326 IAC 6-3-2 (Particulate Emissions Limitations)

This source is subject to the particulate emission limitations as per 326 IAC 6-3-2 (c) for welding operations, paint booth1, paint booth 2a and 2b, paint booth 3 and FRP booth.

- (1) Welding Operations (P = 0.0825 ton / hour)

$$E = 4.10 P^{0.67} \quad \text{where } E = \text{rate of emission in lbs/hr and} \\ P = \text{process weight in tons/hr}$$

$$\begin{aligned} E &= 4.10 (0.024)^{0.67} \\ &= 4.10 (0.0825) \\ &= 0.338 \text{ lbs/hr} \\ &= 1.48 \text{ tons/yr} \end{aligned}$$

Based on this calculation, potential emissions are less than allowable emissions, this welding operations comply with the rule.

- (2) Paint Booth 1, 2a & 2b, 3 and FRP:

$$E = 4.10 P^{0.67} \quad \text{where } E = \text{rate of emission in lbs/hr and} \\ P = \text{process weight in tons/hr}$$

Paint Booths identified as B-1, B-2a & 2b, B-3, FRP comply using the dry filters as control.

326 IAC 8-2-12 (Wood Furniture and Cabinet Coating)

Facilities existing as of July 1, 1990 located in Elkhart County with actual VOC emissions of greater than 15 pounds per day, before control, are subject to the requirements of 326 IAC 8-2-12. The application of coatings to wood furnishings in the paint booth identified as B-1 shall utilize one (1) or more of the following application systems:

- | | |
|----------------------------------|--|
| Airless Spray Application | Air-Assisted Airless Spray Application |
| Electrostatic Spray Application | Electrostatic Bell or Disc Application |
| Heated Airless Spray Application | Roller Coating |
| Brush or Wipe Application | Dip-and-Drain Application |
| High Volume Low Pressure HVLP | Aerosol Spray Cans |

High volume low pressure spray is an acceptable alternative application of air-assisted airless spray. High volume low pressure (HVLP) spray means technology used to apply coating to a substrate by means of coating application equipment which operates between one-tenth (0.1) and ten (10) pounds per square inch gauge (psig) air pressure measured dynamically at the center of the air cap and at the air horns of the spray system.

326 IAC 8-2-9 (Miscellaneous Metal Coating Operations)

Surface coating emission limitations as specified under 326 IAC 8-2-9 are applicable to facilities commenced construction in any county and which have actual emissions of greater than 15 pounds of VOC per day before add-on control.

- (a) Paint Booths 2a and 2b is not subject to this rule because it surface coats only on the plastic and fiber glass portion of the recreational vehicles or motor homes.
- (b) Paint booth -3 is subject to the requirements of 326 IAC 8-2-9 (Miscellaneous Metal Coating Operations) because it surface coats on the metal frames. Pursuant to 326 IAC 8-2-9 (Miscellaneous Metal Coating Operations), the volatile organic compound (VOC) content of coatings applied to metal frames in the paint booth 3 shall be limited to:

Coatings	Limit (pounds of VOC/gallon of coating less water delivered to the applicator)
Extreme Performance Coat	3.50

Appendix F: VOC emission calculation from paint booth -3, black dry enamel MSDS (10461) shows 3.41 lb. VOC per gallons of coating less water, complying with this rule.

326 IAC 8-1-6 (New Facilities, General Reduction Requirements)

Applicability to 326 IAC 8-1-6 requires a best available control technology (BACT) analysis for new facilities commencing operation after January 1, 1980 which potential VOC emissions of 25 tons per year or more and not regulated by other provisions of Article 8.

Best Available Control Technology (BACT) for VOC:

Best Available Control Technology (BACT) analysis for the paint booths identified as Booth 2a and 2b, submitted by Bruce Carter Associates, L.L.C., a consultant for Carpenter Company, was conducted in accordance with the "Top Down BACT Guidance from U.S. EPA".

This analysis evaluated the feasibility of using the following: Waterborne coatings, nonphotochemically reactive solvents, high solid paints, transfer efficiency of spray equipment and add-on controls.

Solvent / Material Substitution:

- (1) Waterborne Coatings - These are sometimes used to reduce the VOC emissions from surface coating operations. Paints are formulated with water replacing some of the volatile organic compounds. The water becomes a carrier solvent in the process, and is evaporated during the drying process. The drying time of the waterborne coatings is dependent upon temperature and humidity, with higher humidity necessitating longer drying times. Newmar's motor homes are painted after the unit is assembled. The coaches contains components made of wood, fiberglass reinforced plastics (FRP), tires, rubber tubing and other rubber parts. The ovens cannot be used because of the heat sensitive materials. Because of the longer drying time, the inability to use drying ovens, and lack of the gloss retention, the use of waterborne coatings for coating of the exterior of the motor homes at this paint booth is **not** a viable option.
- (2) Nonphotochemically Reactive Solvents - The use of nonphotochemically reactive solvents as a replacement of organic solvents in the surface coating process, is **not** feasible because they are not commercially available other than acetone.
- (3) Transfer Efficiency - The company will use robotic high velocity low pressure (HVLP) spray equipment for the surface coating application. The transfer efficiency of HVLP spray equipment is estimated to be 80%.
- (4) High Solid Coatings - These are used to reduce the VOC emissions from surface coating operations. Paints are formulated with a high solid content replacing some of the volatile organic compounds. They create problems with adhesion and gloss which resulted in warranty claims. Coatings with higher solid content would require the addition of a drying oven operating at a temperature above 195 degree F to obtain the finish quality and production rate required. Newmar's motor homes are painted after the unit is assembled. The coaches contain components made of wood, fiberglass reinforced plastics (FRP), tires, rubber tubing and other rubber parts. The ovens cannot be used because of the heat sensitive materials. Because of the longer drying time, the inability to use drying ovens, and lack of the gloss retention, the use of high solid content coatings for the coating of the exterior of the motor homes at this paint booth is **not** a viable option.

Add-on Controls:

- (1) Adsorption

Adsorption systems operate by providing a large surface area on which the air pollutant can adhere. Carbon is commonly used as the adsorptive solid. Due to its internal pore structure, activated carbon has a significant surface area, giving it a large adsorption capacity. In most cases, it's more economical to regenerate the carbon at the source by stripping to an afterburner. This concentration/incineration method is the most economical approach. **The Carbon adsorption system is technically feasible**, therefore further analysis of carbon adsorption with an onsite incineration will be performed.

(2) Recuperative Thermal Oxidizer

This technology recovers up to 70% of the heat of combustion using a gas-to-gas heat exchanger, and is recommended for emission streams containing a minimum of 20 PPM of combustible VOC but less than 25% of the lower explosive limit (LEL) of the pollutant. **This option is technically feasible**, therefore, further analysis will be made on this control option.

(3) Regenerative Thermal Oxidizer

This system recovers up to 95 percent of the heat generated during the oxidation process. This technology is similar in concept to the recuperative thermal Incineration, where both use high temperatures to destroy VOC. It is suitable for the same inlet streams as the recuperative thermal incinerator. The difference is the method of preheating the pollutant stream before the combustion chamber. Instead of the air-to-air heat exchanger used in the recuperative system, regenerative installations have two or more heat recovery chambers. **This option is technically feasible.**

(4) Regenerative Catalytic Incinerator

This technology uses the same method of heat recovery as the regenerative thermal incinerator. The pollutant stream passes through a heat exchanger chamber for preheating by the silica gravel. The pollutant stream passes through a heat recovery chamber for preheating by the silica gravel and into the combustion chamber. After destruction, the high temperature exhaust from the combustion chamber flows through a second heat recovery chamber, heating the silica there. Then the flow reverses and the second chamber becomes the preheater while the first reheats. This option is **not** feasible at this point.

(5) Concentrator Treatment Systems

This system concentrates the VOC in an emission stream and then uses a lower volume of hot air to desorb the pollutant from the bed with a small volume of hot air. This small concentrated air stream is then incinerated. The carbon concentrator treatment systems have been effective on other broad ranges of the hydrocarbons. Zeolite, an inorganic compound consisting mainly of hydrated alkalialuminosilicates, has a large internal pore structure giving it the large surface area necessary for adsorption systems. The concentrator works similarly to a carbon concentrator and withstands temperatures up to 1,800 degrees Fahrenheit, which is hot enough to burn off any hydrocarbon. **Zeolite and carbon concentrator treatment systems are technically feasible, and therefore, will be further evaluated.**

Environmental Impacts:

The following table summarized the environmental impacts of the options that were determined to be technically feasible.

Control	Energy Impacts		NOx Emission rate (#/hr)	Total Operation (hrs./year)	NOx Emission Rate (Tons/year)
	Electricity (KWH/hr)	Natural Gas (MMBTU/hr)			

Regenerative Thermal Oxidization	235	5.85	0.56	8,760	2.45
Recuperative Thermal Oxidization	235	8.0	0.76	8,760	3.35
Zeolite Concentrator with Oxidizer	46.25	0.98	0.10	8,760	0.405
Carbon Concentrator with Oxidizer	92.50	0.62	0.58	8,760	0.25

BACT Cost Analysis

The following tables summarized the options that were determined to be technically feasible.

Capital Cost

Option	Base Price	Direct Cost	Indirect Cost	Total
Regenerative Thermal Oxidizer	\$961,200	\$713, 398	\$0	\$1,674,598
Recuperative Thermal Oxidizer	\$961,200	\$ 703, 598	\$0	\$1, 664,798
Carbon Concentrator w/ Oxidizer	\$ 1,044, 636	\$637, 228	\$ 20, 000	\$ 1, 701, 864
Zeolite Concentrator w/ Oxidizer	\$ 1, 204, 500	\$136,500	\$ 0	\$ 1,443, 305

Annual Operating, Maintenance & Recovery Cost

Option	Direct Cost	Indirect Cost	Capital Recovery Cost	Total
Regenerative Thermal Oxidizer	\$531, 293	\$ 0	\$272, 533	\$ 803, 826
Recuperative Thermal Oxidizer	\$ 626, 464	\$ 0	\$ 272, 533	\$ 898, 997
Carbon Concentrator w/ Oxidizer	\$ 136, 923	\$ 0	\$ 278, 565	\$ 415, 488
Zeolite Concentrator w/ Oxidizer	\$ 102, 331	\$ 0	\$ 236, 486	\$ 338, 817

Evaluation

Option	Potential Emissions (tons/yr)	Emissions Removed (tons/yr)	Destruction Efficiency* (%)	Overall Control Efficiency	\$/ton removed
Regenerative Thermal Oxidizer	137.0	126.0	98%	92%	\$ 6379
Recuperative Thermal Oxidizer	137.0	126.0	98%	92%	\$ 7135
Carbon Concentrator w/ Oxidizer	137.0	123.60	96%	90%	\$ 3362
Zeolite Concentrator w/ Oxidizer	137.0	122.30	95%	89.30%	\$ 2770

* - capture efficiency of 94% is considered.

Methodology:

Emissions removed = (potential emissions)*(control efficiency)

\$/ton removed = total annual cost/emissions removed

The cost breakdown is as follows:

1. Capital Cost
 - a) Base price: purchase price, auxiliary equipment, instruments, controls, taxes and freight.
 - b) Direct installation cost: foundations/supports, erection/handling, electrical, piping, insulation, painting, site preparation and building/facility.
 - c) Indirect installation cost: engineering, supervision, construction/field expenses, construction fee, start up, performance test, model study and contingencies.
2. Annual Cost
 - a) Direct operating cost: operating labor (operator, supervisor), labor and material maintenance, operating materials, utilities (electricity, gas).

- b) Indirect operating cost: overhead, property tax, insurance, administration and capital recovery cost for 10 yrs life of the system at 10% interest rate.

Newmar Corporation pointed out that EPA BACT policy suggested that physical and operational constraints may be considered as limitations of the potential to emit in determining the cost effectiveness of controls. OAM interprets physical constraints as being something like bottlenecks in an operation where one part of the process is restricted by the limited capacity of another part of the operation. Operational constraints would be something like a seasonal limitations, e.g. grain elevators can only operate in the harvest season. Thus, both physical & operational constraints would be beyond the control of the operator. Industrial policies of only operating one shift per day would not be considered an operational constraint.

Newmar Corporation has proposed an emissions cap of 70 tons per year from the two (2) new paint booths (B-2_a & 2_b) and one (1) permitted paint booth (B-2) at existing plant. The existing permitted booth (B-2) and the new booths ((B-2_a & 2_b) have potential emissions of 73.87 and 137 tons per year, respectively. The source has decided to relocate this part of the production to the new plant for future business growth. Therefore, the company requests OAM to consider the 70 TPY VOC emissions cap as BACT limit to satisfy the 326 IAC 8-1-6 (General Provisions relating to VOC rules: General Reduction Requirements for New Facilities) for three (3) combined facilities.

Summary of the BACT Analysis:

- (a) Regenerative thermal oxidizer - This control technology is technically feasible for the Newmar Corporation, with an overall control efficiency of 92%. However, the company rejected this option as cost prohibitive at \$6329 per ton of VOC removed.
- (b) Recuperative thermal Oxidizer - This control technology is technically feasible for the Newmar Corporation, with an overall control efficiency of 92%. However, the company rejected this option as cost prohibitive at \$7135 per ton of VOC removed.
- (c) Carbon concentrator w/ oxidizer - This control technology is technically feasible for the Newmar Corporation, with an overall control efficiency of 90%. However, the company rejected this option as cost prohibitive at \$3362 per ton of VOC removed.
- (d) Zeolite concentrator w/ oxidizer - This control technology is technically feasible for the Newmar Corporation, with an overall control efficiency of 89.30%. However, the company rejected this option as cost prohibitive at \$ 2770 per ton of VOC removed.
- (e) Emissions Limit - This option as cost effective and will not increase the overall volatile organic compounds (VOC) emissions from these facilities.

VOC BACT Conclusion:

The OAM has reviewed the BACT analysis, issues relating to the relocation of the equipments and emissions cap, cost of the project along with the cost of the control equipment. **Due to the high ratio of add-on control equipment costs to process costs, the OAM has determined that the 70 tons VOC per year limit shall be Best Available Control Technology (BACT) for the plastic and fiber glass surface coating operations at the new down draft paint booth identified as B- 2a, B- 2b and one (1) existing permitted paint booth B-2.**

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

This rule does not apply to the paint booths identified as booths 2a and 2b because the paint booths are considered new construction but the spray guns and associated equipments are relocated from the existing plant to the new plant. However, they do not produce a final or intermediate product in and of themselves. Therefore, they are integral part of an existing process.

326 IAC 2-2 (Prevention of Significant Deterioration)

This rule does not apply to this source because the modification will increase the VOC emissions of 229.50 tons per year.

Air Toxic Emissions

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

- (a) This proposed 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 Appendix M of this TSD for detailed air toxic calculations.

Conclusion

The construction of the expansion of the recreational vehicle (RV) manufacturing operation will be subject to the conditions of the attached proposed **Construction Permit No. CP-039-9230-00157**.

Appendix A: Emission Calculations

Natural Gas Combustion Only

MM Btu/hr 0.3 - < 10

Air Make Up Unit (AMU 1 - AMU 3)

Company Name: Newmar Corporation
Address City IN Zip: 1802 Cheyenne Avenue, Nappanee, IN 46550
CP: 039-9230
Plt ID: 039-00157
Reviewer: Manoj P. Patel
Date: Jan. 21, 1998

Heat Input Capacity*
MMBtu/hr

Potential Throughput
MMCF/yr

6.75

59.1

*each AMU rated at one (1) MMBtu/hr.

Pollutant

	PM	PM10	SO2	NOx	VOC	CO
Emission Factor in lb/MMCF	12.0	12.0	0.6	100.0	5.3	21.0
Potential Emission in tons/yr	0.4	0.4	0.02	3.0	0.2	0.6

Methodology

MMBtu = 1,000,000 Btu

MMCF = 1,000,000 Cubic Feet of Gas

Emission Factors for NOx: uncontrolled = 100, Low Nox Burner = 17, Flue gas recirculation = 36

Emission Factors for CO: uncontrolled = 21, Low NOx Burner = 27, Flue gas recirculation = ND

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

Emission Factors from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, and 1.4-3, SCC #1-03-006-03

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

Appendix B: Emission Calculations

Natural Gas Combustion Only

MM Btu/hr 0.3 - < 10

Unit Heaters & Tube Heaters (Fab. 1 to Fab 30)

Company Name: Newmar Corporation

Address City IN Zip: 1802 Cheyenne Avenue, Nappanee, IN 46550

CP: 039-9230

Plt ID: 039-00157

Reviewer: Manoj P. Patel

Date: Jan. 21, 1998

Heat Input Capacity
MMBtu/hr

Potential Throughput
MMCF/yr

5.1

44.8

Pollutant

	PM	PM10	SO2	NOx	VOC	CO
Emission Factor in lb/MMCF	12.0	12.0	0.6	100.0	5.3	21.0
Potential Emission in tons/yr	0.3	0.3	0.01	2.2	0.1	0.5

Methodology

MMBtu = 1,000,000 Btu

MMCF = 1,000,000 Cubic Feet of Gas

Emission Factors for NOx: uncontrolled = 100, Low Nox Burner = 17, Flue gas recirculation = 36

Emission Factors for CO: uncontrolled = 21, Low NOx Burner = 27, Flue gas recirculation = ND

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

Emission Factors from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, and 1.4-3, SCC #1-03-006-03

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

**Appendix C: Emission Calculations
From Welding Operations
SCC: 30905251 & 53**

Company Name: Newmar Corporation
Address City IN Zip: 1802 Cheyenne Avenue, Nappanee, IN 46550
CP: 039-9230
Plt ID: 039-00157
Reviewer: Manoj Patel
Date: Jan. 21, 1998

Type of Welding	No. of Units	Electrode Type	Maximum Electrode Consumption per Unit (lb/hr)	Emission Factors					Potential Emissions				
				lbs pollutant / 1000 lbs electrode consumed					Tons / year				
				PM	Chromium	Cobalt	Managanes	Nickel	PM	Chromium	Cobalt	Managanes	Nickel
MIG	45	ER70S	1.05	5.2	0.01	0.01	3.18	0.01	1.076	0.002	0.002	0.658	0.002
Stick	11	E7018	0.09	18.4	0.06	0.01	10.3	0.02	0.080	0.000	0.000	0.045	0.000
Total Potential Emissions (Tons/year):									1.156	0.002	0.002	0.703	0.002

Methodology:
Emissions (tons/year): Number of units * Maximum Electrode Consumption per unit * E. F. (lbs pollutant / 1000 lbs electrode)* 8760 hrs/year * (1 ton/2000 lb)
Emission Factors for welding operations are from AP-42(5th edition), section 12.19, Table 12.19-1 and 12.19-2.
Electrodes are mutually exclusive.

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

Booth 1

Company Name: **Newmar Corporation**
Address City IN Zip: **1802 Cheyenne Avenue, Nappanee, IN 46550**
CP: **039-9230**
Plt ID: **039-00157**
Reviewer: **Manoj P. Patel**
Date: **Jan. 21, 1998**

MSDS No.	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
Coating																	
10561	Oak Light	7.3	96.77%	0.0%	96.8%	0.0%	3.23%	0.23600	2.500	7.06	7.06	4.17	100.03	18.26	0.21	218.71	65%
10556	Bleached Maple	7.9	81.52%	0.0%	81.5%	0.0%	18.48%	0.01910	2.500	6.44	6.44	0.31	7.38	1.35	0.11	34.85	65%
10180	Lt. Brown Pent Stain	6.7	100.00%	0.0%	100.0%	0.0%	4.31%	0.71000	2.500	6.70	6.70	11.89	285.42	52.09	0.00	155.45	65%
10441	New Cherry	8.0	83.60%	0.0%	83.6%	0.0%	8.50%	0.00270	2.500	6.67	6.67	0.05	1.08	0.20	0.01	78.49	65%
10559	Durovar Plus 65	9.4	48.51%	0.0%	48.5%	0.0%	51.49%	0.29700	2.500	4.56	4.56	3.39	81.26	14.83	5.51	8.86	65%
10402	Sealer	7.4	81.37%	0.0%	81.4%	0.0%	13.00%	0.31300	2.500	6.02	6.02	4.71	113.08	20.64	1.65	46.32	65%
Clean-up Solvents																	
10176	Lacquer Thinner	7.0	100.00%	0.0%	100.0%	0.0%	0.00%	0.10000	2.500	6.99	6.99	1.75	41.94	7.65	0.00	ERR	0%

State Potential Emissions

26.26 630.19 115.01 7.50

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)

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

Booth 2
Company Name: Newmar Corporation
Address City IN Zip: 1802 Cheyenne Avenue, Nappanee, IN 46550
CP: 039-9230
Plt ID: 039-00157
Reviewer: Manoj P. Patel
Date: Jan. 21, 1998

Material	Density (Lb/Gal)	Weight % Volatile (H2O& Organics)	Weight % Water	Formula Mix %	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
Paint																	
5-UB7	9.2	66.30%	0.0%	50.00%	66.3%	0.0%	33.70%	0.50000	1.416	6.10	6.10	4.32	103.64	18.92	3.37	18.10	65%
Stabilizer BCS 600	7.3	97.52%	0.0%	50.00%	97.5%	0.0%	2.48%	0.50000	1.416	7.07	7.07	5.01	120.14	21.92	0.20	285.09	65%
Paint R-T-S	8.2	81.91%	0.0%	100.00%	81.9%	0.0%	18.09%	1.00000	1.416	6.74	6.74	9.55	229.09	41.81	3.23	37.26	65%
Primer																	
Ultrafill 2 E6H59	11.2	31.97%	0.0%	50.00%	32.0%	0.0%	68.03%	0.31000	1.416	3.59	3.59	1.58	37.82	6.90	5.14	5.28	65%
Primer Reducer** ES15	7.5	70.00%	0.0%	37.50%	0.0%	0.0%	0.00%	0.23000	1.416	0.00	0.00	0.00	0.00	0.00	3.21	ERR	0%
Primer Hardner ** UH100	9.6	100.00%	0.0%	12.50%	0.0%	0.0%	0.00%	0.08000	1.416	0.00	0.00	0.00	0.00	0.00	0.00	ERR	0%
Primer R-T-S	9.6	15.99%	0.0%	100.00%	16.0%	0.0%	68.03%	0.63000	1.416	1.54	1.54	1.37	32.96	6.01	11.06	2.26	65%
Clearcoat																	
Clear CC635	7.9	49.37%	0.0%	66.67%	49.4%	0.0%	50.63%	1.00000	1.416	3.91	3.91	5.53	132.71	24.22	8.69	7.71	65%
Redocer Slow CCR 675	7.8	100.00%	0.0%	12.50%	100.0%	0.0%	0.00%	0.19000	1.416	7.75	7.75	2.09	50.04	9.13	0.00	ERR	65%
Turbocharger UCA 50	7.3	99.04%	0.0%	2.50%	99.0%	0.0%	0.96%	0.04000	1.416	7.26	7.26	0.41	9.87	1.80	0.01	756.21	65%
Hardner UH 80	9.0	20.04%	0.0%	16.67%	20.0%	0.0%	79.96%	0.25000	1.416	1.80	1.80	0.64	15.32	2.80	3.91	2.26	65%
Flex Additive V6V299	8.2	49.94%	0.0%	1.66%	49.9%	0.0%	50.06%	0.03000	1.416	4.08	4.08	0.17	4.15	0.76	0.27	8.14	65%
Clearcoat R-T-S	8.1	52.06%	0.0%	100.00%	52.1%	0.0%	47.94%	1.50000	1.416	4.20	4.20	8.91	213.90	39.04	12.58	8.75	65%
Gun Cleaner																	
Gun Cleaner 4-GCL	6.8	90.24%	0.0%	100.00%	90.2%	0.0%	9.76%	0.17000	1.416	6.11	6.11	1.47	35.29	6.44	0.70	62.59	0%
Aluminium Prep.																	
Self Etching Primer 988	6.7	51.00%	0.0%	100.00%	51.0%	0.0%	18.00%	0.05000	1.416	3.41	3.41	0.24	5.79	1.06	0.36	18.93	65%
Pre-Cleaner																	
Ultraclean R7K158	6.2	100.00%	0.0%	100.00%	100.0%	0.0%	0.00%	0.07000	1.416	6.21	6.21	0.62	14.77	2.70	0.00	ERR	0%

41.90 1005.51 97.05 27.93

Worst Case Coating Emissions:	Paint	Primer	Clearcoat	Gun Cleaner	Al. Prep.	Pre-Cleaner	Total Emissions
VOC Emissions (tons/year)	41.81	6.01	39.04	6.44	1.06	2.70	97.05
PM emissions (tons/year)	3.23	11.06	12.58	0.70	0.36	0.00	27.93
VOC - control efficiency	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	
PM - control efficiency	95.00%	95.00%	95.00%	95.00%	95.00%	95.00%	
Controlled VOC emissions (ty)	41.81	6.01	39.04	6.44	1.06	2.70	97.05
Controlled PM emissions (ty)	0.16	0.55	0.63	0.03	0.02	0.00	1.40

State Potential Emissions

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

The Company has limited total of 34 vehicles per day .

Appendix E: Emissions Calculations

VOC and Particulate
From Surface Coating Operations

Booth 2a and 2b

Company Name: Newmar Corporation
Address City IN Zip: 1802 Cheyenne Avenue, Nappanee, IN 46550
CP: 039-9230
Plt ID: 039-00157
Reviewer: Manoj P. Patel
Date: Jan. 21, 1998

Material	Density (Lb/Gal)	Weight % Volatile (H2O& Organics)	Weight % Water	Formula Mix %	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
Paint																	
5-UB7	9.2	66.30%	0.0%	50.00%	66.3%	0.0%	33.70%	0.50000	2.000	6.10	6.10	6.10	146.39	26.72	4.75	18.10	65%
Stabilizer BCS 600	7.3	97.52%	0.0%	50.00%	97.5%	0.0%	2.48%	0.50000	2.000	7.07	7.07	7.07	169.68	30.97	0.28	285.09	65%
Paint R-T-S	8.2	81.91%	0.0%	100.00%	81.9%	0.0%	18.09%	1.00000	2.000	6.74	6.74	13.48	323.58	59.05	4.56	37.26	65%
Primer																	
Ultrafill 2 E6H59	11.2	31.97%	0.0%	50.00%	32.0%	0.0%	68.03%	0.31000	2.000	3.59	3.59	2.23	53.42	9.75	7.26	5.28	65%
Primer Reducer** ES15	7.5	70.00%	0.0%	37.50%	0.0%	0.0%	0.00%	0.23000	2.000	0.00	0.00	0.00	0.00	0.00	4.53	ERR	0%
Primer Hardner ** UH100	9.6	100.00%	0.0%	12.50%	0.0%	0.0%	0.00%	0.08000	2.000	0.00	0.00	0.00	0.00	0.00	ERR	ERR	0%
Primer R-T-S	9.6	15.99%	0.0%	100.00%	16.0%	0.0%	68.03%	0.63000	2.000	1.54	1.54	1.94	46.55	8.50	15.63	2.26	65%
Clearcoat																	
Clear CC635	7.9	49.37%	0.0%	66.67%	49.4%	0.0%	50.63%	1.00000	2.000	3.91	3.91	7.81	187.45	34.21	12.28	7.71	65%
Redocer Slow CCR 675	7.8	100.00%	0.0%	12.50%	100.0%	0.0%	0.00%	0.19000	2.000	7.75	7.75	2.95	70.68	12.90	0.00	ERR	65%
Turbocharger UCA 50	7.3	99.04%	0.0%	2.50%	99.0%	0.0%	0.96%	0.04000	2.000	7.26	7.26	0.58	13.94	2.54	0.01	756.21	65%
Hardner UH 80	9.0	20.04%	0.0%	16.67%	20.0%	0.0%	79.96%	0.25000	2.000	1.80	1.80	0.90	21.64	3.95	5.52	2.26	65%
Flex Additive V6V299	8.2	49.94%	0.0%	1.66%	49.9%	0.0%	50.06%	0.03000	2.000	4.08	4.08	0.24	5.87	1.07	0.38	8.14	65%
Clearcoat R-T-S	8.1	52.06%	0.0%	100.00%	52.1%	0.0%	47.94%	1.50000	2.000	4.20	4.20	12.59	302.12	55.14	17.77	8.75	65%
Gun Cleaner																	
Gun Cleaner 4-GCL	6.8	90.24%	0.0%	100.00%	90.2%	0.0%	9.76%	0.17000	2.000	6.11	6.11	2.08	49.85	9.10	0.98	62.59	0%
Aluminium Prep.																	
Self Etching Primer 988	6.7	51.00%	0.0%	100.00%	51.0%	0.0%	18.00%	0.05000	2.000	3.41	3.41	0.34	8.18	1.49	0.50	18.93	65%
Pre-Cleaner																	
Ultraclean R7K158	6.2	100.00%	0.0%	100.00%	100.0%	0.0%	0.00%	0.07000	2.000	6.21	6.21	0.87	20.87	3.81	0.00	ERR	0%

59.18 1420.21 137.08 39.45

Worst Case Coating Emissions:	Paint	Primer	Clearcoat	Gun Cleaner	Al. Prep.	Pre-Cleaner	Total Emissions
VOC Emissions (tons/year)	59.05	8.50	55.14	9.10	1.49	3.81	137.08
PM emissions (tons/year)	4.56	15.63	17.77	0.98	0.50	0.00	39.45
VOC - control efficiency	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	
PM - control efficiency	95.00%	95.00%	95.00%	95.00%	95.00%	95.00%	
Controlled VOC emissions (ty)	59.05	8.50	55.14	9.10	1.49	3.81	137.08
Controlled PM emissions (ty)	0.23	0.78	0.89	0.05	0.03	0.00	1.97

State Potential Emissions

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

Appendix F: Emissions Calculations
VOC and Particulate
From Surface Coating Operations
Booth 3
Company Name: Newmar Corporation
Address City IN Zip: 1802 Cheyenne Avenue, Nappanee, IN 46550
CP: 039-9230
Plt ID: 039-00157
Reviewer: Manoj P. Patel
Date: Jan. 21, 1998

Material	Density (Lb/Gal)	Weight % Volatile (H2O& Organics)	Weight % Water	Weight % Organics	Volume % Water	Volume % Non-Vol (solids)	Gal of Mat (gal/unit)	Maximum (unit/hour)	Pounds VOC per gallon of coating less water	Pounds VOC per gallon of coating	Potential VOC pounds per hour	Potential VOC pounds per day	Potential VOC tons per year	Particulate Potential ton/yr	lb VOC /gal solids	Transfer Efficiency
Coating																
Black Air Dry Enamel - MSDS 10461	12.2	28.01%	0.0%	28.0%	0.0%	50.60%	0.69300	1.880	3.41	3.41	4.44	106.50	19.44	27.47	6.73	45%
Cleanup Solvents																
Lacquer Thinner	7.0	100.00%	0.0%	100.0%	0.0%	0.00%	0.10000	1.880	6.99	6.99	1.31	31.54	5.76	0.00	ERR	0%
											5.75	138.04	25.19	27.47		

State Potential Emissions

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

**Appendix G: Emissions Calculations
Form DD: Reinforced Plastics and Composites
Fiberglass Processes**

FRP Booth

**Company Name: Newmar Corporation
Address City IN Zip: 1802 Cheyenne Avenue, Nappanee, IN 46550
CP: 039-9230
Pit ID: 039-00157
Reviewer: Manoj P. Patel
Date: Jan. 21, 1998**

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
Resins										
Green Polyester Resin	8.89	49.0%	5.000000	0.05	0.17	4.03	0.73	1.74	15%	65%
Catalyst										
NKP9 Catalyst	9.16	100.0%	0.250000	0.05	0.11	2.75	0.50	0.00	100%	0%
Gelcoat										
White Gelcoat	10	40.0%	2.500000	0.05	0.26	6.25	1.14	1.15	52%	65%
Miscellaneous Materials										
Rigid White Body Filler	14.16	15.0%	3.000000	0.05	0.32	7.65	1.40	2.77	100%	65%
Red cream Hardner	10	20.0%	0.250000	0.05	0.03	0.60	0.11	0.15	100%	65%
Totals:					0.89	21.27	3.88	5.81		
K-2 Basement										
Gel Coat										
Gray Gelcoat	10	40.0%	1.500000	0.02	0.06	1.51	0.28	0.28	52%	65%
Gelcoat additive										
Polycor	13	37.9%	13.000000	0.02	0.20	4.74	0.86	3.22	15%	65%
Catalyst										
NKP9 catalyst	9.16	100.0%	0.500000	0.02	0.09	2.20	0.40	0.00	100%	0%
					0.35	8.45	1.54	3.49		

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

**Appendix H: HAP Emission Calculations
(Booth 1)**

Company Name: Newmar Corporation

Plant Location: 1802 Cheyenne Avenue, Nappanee, IN 46550

County: 039-9230-00157

Permit Reviewer: Manoj P. Patel

Date: Jan. 21, 1998

Material	Density (Lb/Gal)	Gal of Mat (gal/unit)	Maximum (unit/hour)	Weight % Glycol ether	Weight % Toluene	Weight % Methanol	Weight % MEK	Weight % MIBK	Weight % Xylene	Weight % Formalde.	Weight % EthylBenzene	Gylcol Ethers Emissions t/y	Toluene (ton/yr)	Methanol (ton/yr)	MEK (ton/yr)	MIBK (ton/yr)	Xylene (ton/yr)	Formaldehyde emissions t/y	Ehtyl Benzene Emissions (TON/YEAR)		
Coating																					
Oak Light	7.30	0.236000	2.50	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Bleached Maple	7.90	0.019100	2.50	0.00%	0.00%	0.00%	0.00%	0.00%	55.00%	0.00%	15.00%	0.00	0.00	0.00	0.00	0.00	0.91	0.00	0.25	0.00	
Lt. Brown Pent Stain	6.70	0.710000	2.50	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
New Cherry	8.00	0.002700	2.50	2.31%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Durovar Plus 65	9.40	0.297000	2.50	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.10%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00	
Sealer	7.40	0.313000	2.50	0.00%	30.70%	0.00%	6.06%	13.40%	7.59%	0.00%	0.00%	0.00	7.79	0.00	1.54	3.40	1.93	0.00	0.00	0.00	
Cleanup Solvents																					
Lacquer Thineer	7.00	0.100000	2.50	0.00%	60.00%	20.00%	10.00%	10.00%	0.00%	0.00%	0.00%	0.00	4.60	1.53	0.77	0.77	0.00	0.00	0.00	0.00	
												0.01	7.79	1.53	2.30	4.17	2.83	0.03	0.25		

Total State Potential Emissions

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

Hapcalc.wk4 9/95

**Appendix I: HAP Emission Calculations
(Booth 2)**

Company Name: Newmar Corporation
Plant Location: 1802 Cheyenne Avenue, Nappanee, IN 46550
Permit No. 039-9230-00157
Permit Reviewer: Manoj P. Patel
Date: Jan. 21, 1998

Material	Density (Lb/Gal)	Gal of Mat (gal/unit)	Maximum (unit/hour)	Formula Mix %	Weight % Toluene	Weight % Ethylbenzene	Weight % Xylene	Weight % MEK	Weight % Gycol Ether	Toluene Emissions (ton/yr)	Ethylbenzene Emissions (ton/yr)	Xylene Emissions (ton/yr)	MEK Emissions (ton/yr)	Gycol Ethers Emissions (ton/yr)
Paint														
5-UB7	9.2	0.50	1.42	50.00%	5.00%	7.00%	30.00%	0.00%	2.00%	0.71	1.00	4.28	0.00	0.29
Stabilizer	7.25	0.50	1.42	50.00%	38.00%	5.00%	29.00%	0.00%	0.00%	4.27	0.56	3.26	0.00	0.00
Primer														
Ultrafill 2	11.23	0.31	1.42	50.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00
Primer Reducer**	7.5	0.23	1.42	37.50%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00
Primer Hardner**	7.5	0.08	1.42	12.50%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00
Clearcoat														
Clear CC635	7.91	1.00	1.42	66.67%	0.00%	0.00%	0.00%	16.00%	0.00%	0.00	0.00	0.00	5.23	0.00
Redocer Slow CCR-675	7.75	0.19	1.42	12.50%	0.00%	0.00%	4.00%	0.00%	0.00%	0.00	0.00	0.05	0.00	0.00
Turbocharger UCA-50	7.33	0.04	1.42	2.50%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00
Hardner UH80	9	0.25	1.42	16.67%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00
Flex Additive V6V299	8.16	0.03	1.42	1.67%	47.00%	0.00%	0.00%	0.00%	0.00%	0.01	0.00	0.00	0.00	0.00
Gun Cleaner														
Gun Cleaner 4-GCL	6.77	0.17	1.42	100.00%	28.89%	0.00%	5.00%	0.00%	0.00%	2.06	0.00	0.36	0.00	0.00
Alu. Prep.														
Self Etching Primer	6.68	0.05	1.42	100.00%	2.00%	0.00%	0.00%	0.00%	0.00%	0.04	0.00	0.00	0.00	0.00
Pre-Cleaner														
Ultracklean	6.21	0.07	1.42	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00
METHODOLOGY										7.10	1.56	7.94	5.23	0.29

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 * % formula mix

**Appendix I: HAP Emission Calculations
(Booth 2a and 2b)**

Company Name: Newmar Corporation
Plant Location: 1802 Cheyenne Avenue, Nappanee, IN 46550
Permit No.: 039-9230-00157
Permit Reviewer: Manoj P. Patel
Date: Jan. 21, 1998

Material	Density (Lb/Gal)	Gal of Mat (gal/unit)	Maximum (unit/hour)	Formula Mix %	Weight % Toluene	Weight % Ethylbenzene	Weight % Xylene	Weight % MEK	Weight % Gycol Ether	Toluene Emissions (ton/yr)	Ethylbenzene Emissions (ton/yr)	Xylene Emissions (ton/yr)	MEK Emissions (ton/yr)	Gycol Ethers Emissions (ton/yr)
Paint														
5-UB7	9.2	0.50	2.00	50.00%	5.00%	7.00%	30.00%	0.00%	2.00%	1.01	1.41	6.04	0.00	0.40
Stabilizer	7.25	0.50	2.00	50.00%	38.00%	5.00%	29.00%	0.00%	0.00%	6.03	0.79	4.60	0.00	0.00
Primer														
Ultrafill 2	11.23	0.31	2.00	50.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00
Primer Reducer**	7.5	0.23	2.00	37.50%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00
Primer Hardner**	7.5	0.08	2.00	12.50%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00
Clearcoat														
Clear CC635	7.91	1.00	2.00	66.67%	0.00%	0.00%	0.00%	16.00%	0.00%	0.00	0.00	0.00	7.39	0.00
Redocer Slow CCR-675	7.75	0.19	2.00	12.50%	0.00%	0.00%	4.00%	0.00%	0.00%	0.00	0.00	0.06	0.00	0.00
Turbocharger UCA-50	7.33	0.04	2.00	2.50%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00
Hardner UH80	9	0.25	2.00	16.67%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00
Flex Additive V6V299	8.16	0.03	2.00	1.67%	47.00%	0.00%	0.00%	0.00%	0.00%	0.02	0.00	0.00	0.00	0.00
Gun Cleaner														
Gun Cleaner 4-GCL	6.77	0.17	2.00	100.00%	28.89%	0.00%	5.00%	0.00%	0.00%	2.91	0.00	0.50	0.00	0.00
Alu. Prep.														
Self Etching Primer	6.68	0.05	2.00	100.00%	2.00%	0.00%	0.00%	0.00%	0.00%	0.06	0.00	0.00	0.00	0.00
Pre-Cleaner														
Ultraclean	6.21	0.07	2.00	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00
METHODOLOGY										10.03	2.20	11.22	7.39	0.40

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 * % formula mix

Appendix J: HAP Emission Calculations

(Booth 3)

Company Name: Newmar Corporation
Plant Location: 1802 Cheyenne Avenue, Nappanee, IN 46550
County: 039-9230-00157
Permit Reviewer: Manoj P. Patel
Date: Jan. 26, 1998

Material	Density (Lb/Gal)	Gal of Mat (gal/unit)	Maximum (unit/hour)	Formula Mix %	Weight % Glycol Ethers	Weight % Toluene	Weight % Methanol	Weight % MEK	Weight % Xylene	Weight % Ethylbenzene	Glycol Ethers Emissions (ton/yr)	Toluene Emissions (ton/yr)	Methanol Emissions (ton/yr)	MEK Emissions (ton/yr)	Xylene Emissions (ton/yr)	EthylBenzene Emissions (ton/yr)	
Coating																	
Black 10461	7.3	0.69	1.88	100.00%	2.80%	3.50%	0.00%	2.20%	1.90%	0.40%	1.17	1.46	0.00	0.92	0.79	0.17	
Cleanup Solvents																	
Lacquer Thinner	6.99	0.10	1.88	100.00%	0.00%	60.00%	20.00%	10.00%	0.00%	0.00%	0.00	3.45	1.15	0.58	0.00	0.00	
												1.17	4.91	1.15	1.49	0.79	0.17

Total State Potential Emissions

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 K: HAP Emission Calculations

(Booth FRP)

Company Name: Newmar Corporation

Plant Location: 1802 Cheyenne Avenue, Nappanee, IN 46550

Permit: 039-9230-00157

Permit Reviewer: Manoj P. Patel

Date: Jan. 26, 1998

Material	Density (Lb/Gal)	Gal of Mat (gal/unit)	Maximum (unit/hour)	Flash Off %	Weight% Styrene	Weight% Toluene	Weight% Formaldehyde	Weight% Benzene	Weight% Hexane	Weight% Glycol Ethers	Weight% Methanol	Styrene Emissions (ton/yr)	Toluene Emissions (ton/yr)	Formaldehyde Emissions (ton/yr)	Benzene Emissions (ton/yr)	Hexane Emissions (ton/yr)	Glycol Ethers Emissions (ton/yr)	Methanol Emissions (ton/yr)
Green Polyester Resin	8.89	5.000000	0.05	15.40%	49.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.73	0.00	0.00	0.00	0.00	0.00	0.00
NKP9 Catalyst	9.16	0.250000	0.05	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00
White Gelcoat	10	2.500000	0.05	52.40%	35.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	1.00	0.00	0.00	0.00	0.00	0.00	0.00
Rigid White Body Filler	14.16	3.000000	0.05	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Red Cream Hardner	10	0.250000	0.05	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Gray Gel Coat	10	1.500000	0.02	52.40%	35.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.24	0.00	0.00	0.00	0.00	0.00	0.00
Polycor	10.49	13.000000	0.02	15.40%	33.68%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.62	0.00	0.00	0.00	0.00	0.00	0.00
NKP9 Catalyst	9.16	0.500000	0.02	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00

2.60

METHODOLOGY

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

Appendix M: Air Toxic Calculations

Company Name: Newmar Corporation
Address City IN Zip: 1802 Cheyenne Avenue, Nappanee, IN 46550
CP: 039-9230
Plt ID: 039-00157
Reviewer: Manoj P. Patel

Stack	Toluene	Xylene	MEK	Ethyl Benzene	Methanol	Glycol Ethers	Styrene
B-1	1.79	0.65	0.35	0.1	0.35	0.00	0.00
B2a 1 & 2	0.41 each	0.46 each	0.3 each	0.09 each	0.00	0.00	0.00
B2b1 & 2	0.41 each	0.46 each	0.3 each	0.09 each	0.00	0.00	0.00
B-3	1.12	0.18	0.35	0.04	0.26	0.27	0.00
B-4	0.11	0.00	0.00	0.00	0.00	0.00	0.60
Concentration ug/m ³	58.5	31.3	21	5.8	9.6	5.8	3.2
OSHA PEL	750,000	435,000	590,000	435, 000	260,000	0.00	420,000
% of PEL	0.008	0.007	0.004	0.001	0.004	0.00	0.001