



State of Ohio Environmental Protection Agency

**RE: FINAL PERMIT TO INSTALL
BUTLER COUNTY**

CERTIFIED MAIL

Street Address:

122 S. Front Street

Lazarus Gov. Center TELE: (614) 644-3020 FAX: (614) 644-2329

Mailing Address:

Lazarus Gov. Center
P.O. Box 1049

Application No: 14-05081

DATE: 7/3/2001

Marine Biotech, Inc.
Neil Helwig
5009 Cincinnati-Brookville Road
Shandon, OH 45063

Enclosed please find an Ohio EPA Permit to Install which will allow you to install the described source(s) in a manner indicated in the permit. Because this permit contains several conditions and restrictions, I urge you to read it carefully.

The Ohio EPA is urging companies to investigate pollution prevention and energy conservation. Not only will this reduce pollution and energy consumption, but it can also save you money. If you would like to learn ways you can save money while protecting the environment, please contact our Office of Pollution Prevention at (614) 644-3469.

You are hereby notified that this action by the Director is final and may be appealed to the Ohio Environmental Review Appeals Commission pursuant to Chapter 3745.04 of the Ohio Revised Code. The appeal must be in writing and set forth the action complained of and the grounds upon which the appeal is based. It must be filed within thirty (30) days after the notice of the Directors action. A copy of the appeal must be served on the Director of the Ohio Environmental Protection Agency within three (3) days of filing with the Commission. An appeal may be filed with the Environmental Review Appeals Commission at the following address:

Environmental Review Appeals Commission
236 East Town Street, Room 300
Columbus, Ohio 43215

Very truly yours,

Thomas G. Rigo, Manager
Field Operations and Permit Section
Division of Air Pollution Control

cc: USEPA

HCDES



**Permit To Install
Terms and Conditions**

**Issue Date: 7/3/2001
Effective Date: 7/3/2001**

FINAL PERMIT TO INSTALL 14-05081

Application Number: 14-05081
APS Premise Number: 1409000699
Permit Fee: **\$400**
Name of Facility: Marine Biotech, Inc.
Person to Contact: Neil Helwig
Address: 5009 Cincinnati-Brookville Road
Shandon, OH 45063

Location of proposed air contaminant source(s) [emissions unit(s)]:
**5009 Cincinnati-Brookville Road
Shandon, Ohio, Ohio**

Description of proposed emissions unit(s):
two stations for spray and hand layup of composite fiberglass parts.

The above named entity is hereby granted a Permit to Install for the above described emissions unit(s) pursuant to Chapter 3745-31 of the Ohio Administrative Code. Issuance of this permit does not constitute expressed or implied approval or agreement that, if constructed or modified in accordance with the plans included in the application, the above described emissions unit(s) of environmental pollutants will operate in compliance with applicable State and Federal laws and regulations, and does not constitute expressed or implied assurance that if constructed or modified in accordance with those plans and specifications, the above described emissions unit(s) of pollutants will be granted the necessary permits to operate (air) or NPDES permits as applicable.

This permit is granted subject to the conditions attached hereto.

Ohio Environmental Protection Agency

Director

Part I - GENERAL TERMS AND CONDITIONS

A. Permit to Install General Terms and Conditions

1. Compliance Requirements

The emissions unit(s) identified in this Permit to Install shall remain in full compliance with all applicable State laws and regulations and the terms and conditions of this permit.

2. Reporting Requirements Related to Monitoring and Recordkeeping Requirements

The permittee shall submit required reports in the following manner:

- a. Reports of any required monitoring and/or recordkeeping information shall be submitted to the appropriate Ohio EPA District Office or local air agency.
- b. Except as otherwise may be provided in the terms and conditions for a specific emissions unit, quarterly written reports of (a) any deviations (excursions) from emission limitations, operational restrictions, and control device operating parameter limitations that have been detected by the testing, monitoring, and recordkeeping requirements specified in this permit, (b) the probable cause of such deviations, and (c) any corrective actions or preventive measures which have been or will be taken, shall be submitted to the appropriate Ohio EPA District Office or local air agency. If no deviations occurred during a calendar quarter, the permittee shall submit a quarterly report, which states that no deviations occurred during that quarter. The reports shall be submitted quarterly, i.e., by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarters. (These quarterly reports shall exclude deviations resulting from malfunctions reported in accordance with OAC rule 3745-15-06.)

3. Records Retention Requirements

Each record of any monitoring data, testing data, and support information required pursuant to this permit shall be retained for a period of five years from the date the record was created. Support information shall include, but not be limited to, all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by this permit. Such records may be maintained in computerized form.

4. Inspections and Information Requests

The Director of the Ohio EPA, or an authorized representative of the Director, may, subject to the safety requirements of the permittee and without undue delay, enter upon the premises of this source at any reasonable time for purposes of making inspections, conducting tests, examining records or reports pertaining to any emission of air contaminants, and determining compliance with any applicable State air pollution laws and regulations and the terms and conditions of this permit. The permittee shall furnish to the Director of the Ohio EPA, or an authorized

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representative of the Director, upon receipt of a written request and within a reasonable time, any information that may be requested to determine whether cause exists for modifying, reopening or revoking this permit or to determine compliance with this permit. Upon verbal or written request, the permittee shall also furnish to the Director of the Ohio EPA, or an authorized representative of the Director, copies of records required to be kept by this permit.

5. Scheduled Maintenance/Malfunction Reporting

Any scheduled maintenance of air pollution control equipment shall be performed in accordance with paragraph (A) of OAC rule 3745-15-06. The malfunction of any emissions units or any associated air pollution control system(s) shall be reported to the appropriate Ohio EPA District Office or local air agency in accordance with paragraph (B) of OAC rule 3745-15-06. Except as provided in that rule, any scheduled maintenance or malfunction necessitating the shutdown or bypassing of any air pollution control system(s) shall be accompanied by the shutdown of the emissions unit(s) that is (are) served by such control system(s).

6. Permit Transfers

Any transferee of this permit shall assume the responsibilities of the prior permit holder. The appropriate Ohio EPA District Office or local air agency must be notified in writing of any transfer of this permit.

7. Air Pollution Nuisance

The air contaminants emitted by the emissions units covered by this permit shall not cause a public nuisance, in violation of OAC rule 3745-15-07.

8. Termination of Permit to Install

This Permit to Install shall terminate within eighteen months of the effective date of the Permit to Install if the owner or operator has not undertaken a continuing program of installation or modification or has not entered into a binding contractual obligation to undertake and complete within a reasonable time a continuing program of installation or modification. This deadline may be extended by up to 12 months if application is made to the Director within a reasonable time before the termination date and the party shows good cause for any such extension.

9. Construction of New Sources(s)

The proposed emissions unit(s) shall be constructed in strict accordance with the plans and application submitted for this permit to the Director of the Ohio Environmental Protection Agency. There may be no deviation from the approved plans without the express, written approval of the Agency. Any deviations from the approved plans or the above conditions may lead to such sanctions and penalties as provided under Ohio law. Approval of these plans does not constitute an assurance that the proposed facilities will operate in compliance with all Ohio laws and regulations. Additional facilities shall be installed upon orders of the Ohio

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Environmental Protection Agency if the proposed sources cannot meet the requirements of this permit or cannot meet applicable standards.

If the construction of the proposed emissions unit(s) has already begun or has been completed prior to the date the Director of the Environmental Protection Agency approves the permit application and plans, the approval does not constitute expressed or implied assurance that the proposed facility has been constructed in accordance with the approved plans. The action of beginning and/or completing construction prior to obtaining the Director's approval constitutes a violation of OAC rule 3745-31-02. Furthermore, issuance of the Permit to Install does not constitute an assurance that the proposed source will operate in compliance with all Ohio laws and regulations. Approval of the plans in any case is not to be construed as an approval of the facility as constructed and/or completed. Moreover, issuance of the Permit to Install is not to be construed as a waiver of any rights that the Ohio Environmental Protection Agency (or other persons) may have against the applicant for starting construction prior to the effective date of the permit. Additional facilities shall be installed upon orders of the Ohio Environmental Protection Agency if the proposed facilities cannot meet the requirements of this permit or cannot meet applicable standards.

10. Public Disclosure

The facility is hereby notified that this permit, and all agency records concerning the operation of this permitted source, are subject to public disclosure in accordance with OAC rule 3745-49-03.

11. Applicability

This Permit to Install is applicable only to the emissions unit(s) identified in the Permit to Install. Separate application must be made to the Director for the installation or modification of any other emissions unit(s).

12. Best Available Technology

As specified in OAC Rule 3745-31-05, all new sources must employ Best Available Technology (BAT). Compliance with the terms and conditions of this permit will fulfill this requirement.

13. Source Operation and Operating Permit Requirements After Completion of Construction

This facility is permitted to operate each source described by this Permit to Install for a period of up to one year from the date the source commenced operation. This permission to operate is granted only if the facility complies with all requirements contained in this permit and all applicable air pollution laws, regulations, and policies. Pursuant to OAC Chapter 3745-35, the permittee shall submit a complete operating permit application within thirty (30) days after commencing operation of the emissions unit(s) covered by this permit.

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14. Construction Compliance Certification

The applicant shall provide Ohio EPA with a written certification (see enclosed form) that the facility has been constructed in accordance with the Permit to Install application and the terms and conditions of the Permit to Install. The certification shall be provided to Ohio EPA upon completion of construction but prior to startup of the source.

15. Fees

The permittee shall pay fees to the Director of the Ohio EPA in accordance with ORC section 3745.11 and OAC Chapter 3745-78. The permittee shall pay all applicable Permit to Install fees within 30 days after the issuance of this Permit to Install.

B. Permit to Install Summary of Allowable Emissions

The following information summarizes the total allowable emissions, by pollutant, based on the individual allowable emissions of each air contaminant source identified in this permit.

SUMMARY (for informational purposes only)
TOTAL PERMIT TO INSTALL ALLOWABLE EMISSIONS

<u>Pollutant</u>	<u>Tons Per Year</u>
OC	14.7

PART II - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. Applicable Emissions Limitations and/or Control Requirements

1. The specific operations(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
R002 - Spray, filament winding, and hand layup station for fabrication of fiberglass parts	OAC rule 3745-31-05(A)(3)	4.95 TPY OC from resin and gelcoats combined; 13.2 lbs OC /day and 2.4 TPY OC from cleanup material The requirements of this rule also include compliance with the requirements of OAC rule 3745-21-07(G)(2) and OAC rule 3745-31-05(D).
	OAC rule 3745-31-05(D) Synthetic Minor to avoid MACT and Title V	See term A.2.b.
	OAC rule 3745-21-07(G)(2)	8 lbs OC/hr, 40 lbs OC/day, excluding cleanup material

2. Additional Terms and Conditions

- 2.a Compliance with OAC rule 3745-31-05(A)(3) shall be demonstrated by the emission limitations, resin, gelcoat and cleanup material usage limits and compliance with the Ohio EPA Air Toxics Policy.
- 2.b The actual emissions of Hazardous Air Pollutants (HAPs) as identified in Section 112(b) of Title III of the Clean Air Act from this facility shall not exceed 9.9 TPY for any single HAP and 24.9 TPY for any combination of HAPs. Compliance with the above limitations

shall be based on a rolling, 12-month summation.

The permittee has existing records to demonstrate compliance upon issuance of the permit.

- 2.c** Emissions from any combination of resins and gelcoats and application methods employed in this emissions unit shall not exceed 8 pounds of OC per hour, 40 pounds of OC per day, and 4.95 tons of OC per year, excluding cleanup materials.

B. Operational Restrictions

1. When employing only polyester resins in R002, the amount of polyester resin employed in this emissions unit shall not exceed the following limits:

	Gal./hour	TPH	Gal./day	TPD
spray	8.24	0.038	41.21	0.19
filament winding	10.87	0.050	54.35	0.25
manual layup	14.14	0.065	70.70	0.33

2. When employing only vinyl ester resins in R002, the amount of vinyl ester resin employed in this emissions unit shall not exceed the following limits:

	Gal./hour	TPH	Gal./day	TPD
spray	5.68	0.025	28.38	0.12
filament winding	9.04	0.039	45.21	0.20
manual layup	10.91	0.047	54.57	0.24

3. When employing only gelcoats in R002, the amount of gelcoat employed for this emissions unit shall not exceed the following limits:

	Gal./hour	TPH	Gal./day	TPD
spray + manual layup	4.19	0.023	20.94	0.11

4. The density and styrene content of the materials employed in emissions unit R002 shall not exceed the following limits:

	Lbs. /gallon	Styrene %, by weight
polyester resins	9.20	40.0
vinyl ester resins	8.67	48.0
gelcoats	10.87	30.8

5. The methyl methacrylate content of the gelcoats employed in emissions unit R002 shall not exceed 5.0 %.

6. The amount of cleanup material evaporated in this emissions unit shall not exceed 2 gallons per day and 730 gallons per year.
7. The OC content of the cleanup materials employed in emissions unit R002 shall not exceed 6.6 lbs. OC per gallon, as applied.
8. The use of photochemically reactive cleanup materials as defined in OAC rule 3745-21-01(C)(5) is prohibited.
9. The permittee shall install a vertical stack with a height, exit gas velocity, and diameter such that the requirements of the Ohio EPA Air Toxics Policy and the allowable emissions of toxic pollutants can be met. Note: HCDES successfully modeled styrene emissions (passing the MAGLC limit) using an 18 foot stack height, 2000 foot/minute exit velocity, and stack diameter of 1.5 feet. The permittee shall notify this agency if any of these parameters are changed or a rain cap added so that compliance can be determined.

C. Monitoring and/or Recordkeeping Requirements

1. The permittee shall collect and record the following information for each hour for this emissions unit:
 - a. The company identification and density of each coating (by type of resin and gelcoat) employed.
 - b. The number of pounds/tons and gallons of each coating material employed for each method of application.
 - c. The percent, by weight, styrene of each coating employed in this emissions unit.
 - d. The percent, by weight, methyl methacrylate of each coating employed in this emissions unit.
 - e. The emissions factor, in pounds of styrene and/or methyl methacrylate emitted per ton of resin or gelcoat processed, for each method of application as outlined in the Unified Emissions Factors for Open Molding of Composites Table, April 7, 1999.
 - f. The total number of hours the emissions unit was in operation for each application method.

Emissions Unit ID: **R002**

- g. The total organic compound emission rate for all coatings employed, in pounds per hour (b x e) (for both styrene and methyl methacrylate).
- h. The total organic compound emission rate for all coatings employed, in pounds per day (summation of the hourly emissions from g).

[Note: The coating information must be for the coatings as employed, including any thinning solvents added at the emission unit. Also the definitions of "nonphotochemically reactive" is based upon OAC rule 3745-21-01(C)(5).]

- 2. The permittee shall collect and record the following information for each day for this emissions unit:
 - a. The company identification of each cleanup material employed.
 - b. The number of gallons of cleanup material employed per day.
 - c. The organic compound content of the cleanup material, in pounds per gallon.
 - d. The total organic compound emission rate (b*c) for all cleanup material, in pounds per day.
 - e. A record of each cleanup material employed in this emissions unit indicating, whether or not the liquid organic material is photochemically reactive as identified in OAC rule 3745-21-01(C)(5).
- 3. The permittee shall collect and record the following information each month for the entire facility:
 - a. The name and identification number of each HAP* containing material employed.
 - b. The amount of each HAP containing material employed, in pounds.
 - c. The total individual HAP emissions for each HAP from all HAP containing materials employed, in pounds or tons per month. (This shall be calculated by using the appropriate emissions factor for each individual HAP for each HAP containing material).
 - d. The total combined HAP emissions from all HAP containing material employed, in pounds or tons per month. [This shall be calculated by adding the emissions from (c) for each individual HAP emitted].
 - e. The updated rolling, 12-month summation for individual HAP emissions for each HAP, in

pounds or tons. This shall include the information for the current month and the preceding eleven calendar months.

- f. The updated rolling, 12-month summation for total combined HAP emissions, in pounds or tons. This shall include the information for the current month and the preceding eleven calendar months.

* A listing of the HAPs can be found in Section 112(b) of the Clean Air Act or can be obtained by contacting your Hamilton County Department of Environmental Services contact. This information does not have to be kept on a line-by-line basis.

4. The permit to install for this emissions unit (R002) was evaluated based on the actual materials (typically coatings and cleanup materials) and the design parameters of the emissions unit's exhaust system, as specified by the permittee in the permit to install application. The Ohio EPA's "Review of New Sources of Air Toxic Emissions" policy ("Air Toxic Policy") was applied for each pollutant emitted by this emissions unit using data from the permit to install application and the SCREEN 3.0 model (or other Ohio EPA approved model). The predicted 1-hour maximum ground-level concentration from the use of the SCREEN 3.0 model was compared to the Maximum Ground-Level Concentration (MAGLC).

The following summarizes the results of the modeling for the "worst case" pollutant(s):

Pollutant: Styrene

TLV (ug/m3): 85,000

Maximum Hourly Emission Rate (lbs/hr): 16.0

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 1876.1

MAGLC (ug/m3): 2024

Physical changes to or in the method of operation of the emissions unit after its installation or modification could affect the parameters used to determine whether or not the "Air Toxics Policy" is satisfied. Consequently, prior to making a change that could impact such parameters, the permittee shall conduct an evaluation to determine that the "Air Toxic Policy" will still be satisfied. If, upon evaluation, the permittee determines that the "Air Toxic Policy" will not be satisfied, the permittee will not make the change. Changes that can affect the parameters used in the "Air Toxic Policy" include the following:

- a. changes in the composition of the materials used (typically for coatings or cleanup materials), or the use of new materials, that would result in the emission of a compound with a lower Threshold Limit Value (TLV), as indicated in the most recent version of the handbook entitled "American Conference of Governmental Industrial Hygienists

(ACGIH)," than the lowest TLV value previously modeled;

- b. changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any pollutant with a listed TLV that was proposed in the application and modeled: and
- c. physical changes to the emissions unit or its exhaust parameters (e.g., increased/decreased exhaust flow, changes in stack height, changes in stack diameter, etc.).

If the permittee determines that the "Air Toxic Policy" will be satisfied with the above changes, the Ohio EPA will not consider the change(s) to be a "modification" under OAC rule 3745-31-01(VV)(1)(a)(ii), and a modification of the existing permit to install will not be required. If the change(s) is(are) defined as a modification under other provisions of the modification definition [other than (VV)(1)(a)(ii)], then the permittee shall obtain a final permit to install prior to the change.

The permittee shall collect, record, and retain the following information when it conducts evaluations to determine that the changed emissions unit will satisfy the "Air Toxic Policy":

- a. a description of the parameters changed (composition of materials, new pollutants emitted, change in stack/exhaust parameters, etc.);
 - b. documentation of its evaluation and determination that the changed emissions unit still satisfies the "Air Toxic Policy"; and
 - c. when the computer modeling is performed, a copy of the resulting computer model runs that show the results of the application of the "Air Toxic Policy" for the change.
5. The permittee shall maintain monthly records of the OC emissions from the coatings for this emissions unit. The OC emissions shall be summarized in tons per year at the end of each calendar year.

D. Reporting Requirements

- 1. The permittee shall submit deviation (excursion) reports which include the following information for this emissions unit:
 - a. An identification of each day during which the hourly organic compound emissions from the coatings exceeded 8 pounds per hour, and the actual hourly organic compound emissions for each such day.
 - b. An identification of each day during which the organic compound emissions from the

coatings exceeded 40 pounds per day, and the actual organic compound emissions for each such day.

2. The permittee shall submit deviation (excursion) reports which identify all exceedances of the usage limitations in term B.1, B.2., B.3. and B.6.
3. The permittee shall submit deviation reports which identify all exceedances of the density, styrene content, methyl methacrylate and cleanup material OC content limitations in term B.4, B.5, and B.7.
4. The permittee shall notify the Hamilton County Department of Environmental Services of any exceedance of the HAP emissions limitations set forth in term A.2.b. The permittee shall submit annual reports which identify all exceedances of these limitations, as well as the corrective actions that were taken to achieve compliance. These reports shall be submitted by January 31 of each year. If no exceedances occurred during the reporting period then a report is required stating so.
5. The permittee shall submit annual reports which specify the total organic compound emissions from emissions unit R002 for the previous calendar year. This report shall list the emissions from the coatings and cleanup materials separately. These reports shall be submitted by January 31 of each year.
6. The permittee shall notify the Hamilton County Department of Environmental Services in writing identifying each day during which any photochemically reactive cleanup material [as defined in OAC rule 3745-21-01(C)(5)] was employed in this emissions unit. This report shall identify the cause for the use of the photochemically reactive material(s) and the estimated total quantity of organic compound emissions emitted each such day. This report shall be submitted to the Hamilton County Department of Environmental Services within 45 days after the exceedance occurs.
7. Unless specified, the deviation reports shall be submitted in accordance with the reporting requirements of the General Terms and Conditions of this permit.

E. Testing Requirements

1. Compliance with the OC emission limitations for this emissions unit shall be demonstrated by the following: OC emissions rate = the sum of gelcoat OC emissions/unit time + resin OC emissions/unit time. Emission factors vary by the application method used. This includes the styrene and methyl methacrylate.

Lbs. coating used /hour = gallons coating used/hour X coating density (lbs./gallon)

- a. $\text{Lbs./hr OC emissions} = [\text{Lbs. gel coat/hr} \times \text{ton/2000 lbs.} \times \text{emission factor (lbs/ton)}] + [\text{Lbs. resin/hr} \times \text{ton/2000 lbs.} \times \text{emission factor (lbs/ton)}]$
- b. $\text{Lbs./day OC emissions} = [\text{Lbs. gel coat/day} \times \text{ton/2000 lbs.} \times \text{emission factor (lbs/ton)}] + [\text{Lbs. resin/day} \times \text{ton/2000 lbs.} \times \text{emission factor (lbs/ton)}]$
- c. $\text{TPY OC emissions} = (\text{tons gel coat/year} \times \text{ton/2000 lbs.} \times \text{emission factor (lbs/ton)}) + (\text{tons resin/year} \times \text{ton/2000 lbs.} \times \text{emission factor (lbs/ton)})$

The emissions factor, in pounds of styrene emitted per ton of resin or gelcoat processed, for each method of application is outlined in the Unified Emissions Factors for Open Molding of Composites table, April 7, 1999.

- 2. Compliance with the usage restrictions in term B.1., B.2., B.3. and B.6. shall be demonstrated by the recordkeeping in term C.1. and C.2.
- 3. Compliance with the styrene content, methyl methacrylate content, density, and OC content for the cleanup materials in term B.4., B.5. and B.7. shall be demonstrated by the recordkeeping in term C.1. and C.2.
- 4. Formulation data or USEPA method 24 shall be used to determine the OC contents of the coatings.
- 5. Compliance with the HAPs limitations in term A.2.b. shall be demonstrated by the recordkeeping in term C.3.
- 6. Compliance with term B.8 shall be demonstrated by the record keeping in term C.2.

F. Miscellaneous Requirements

1. The terms and conditions in this permit to install shall supercede PTI 14-2443 issued on July 21, 1993.
2. The following terms and conditions of this permit are federally enforceable: A., B.1 - B.9, C.1. - C.3., C.5, D and E.

PART II - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. Applicable Emissions Limitations and/or Control Requirements

1. The specific operations(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
R003 - Spray, filament winding, and hand layup station for fabrication of fiberglass parts	OAC rule 3745-31-05(A)(3)	4.95 TPY OC from resin and gelcoats combined; 13.2 lbs OC /day and 2.4 TPY OC from cleanup material The requirements of this rule also include compliance with the requirements of OAC rule 3745-21-07(G)(2) and OAC rule 3745-31-05(D).
	OAC rule 3745-31-05(D) Synthetic Minor to avoid MACT and Title V	See term A.2.b.
	OAC rule 3745-21-07(G)(2)	8 lbs OC/hr, 40 lbs OC/day, excluding cleanup materials

2. Additional Terms and Conditions

- 2.a Compliance with OAC rule 3745-31-05(A)(3) shall be demonstrated by the emission limitations, resin, gelcoat and cleanup material usage limits and compliance with the Ohio EPA Air Toxics Policy.
- 2.b The actual emissions of Hazardous Air Pollutants (HAPs) as identified in Section 112(b) of Title III of the Clean Air Act from this facility shall not exceed 9.9 TPY for any single

Emissions Unit ID: **R003**

HAP and 24.9 TPY for any combination of HAPs. Compliance with the above limitations shall be based on a rolling, 12-month summation.

The permittee has existing records to demonstrate compliance upon issuance of the permit.

- 2.c** Emissions from any combination of resins and gelcoats and application methods employed in this emissions unit shall not exceed 8 pounds of OC per hour, 40 pounds of OC per day, and 4.95 tons of OC per year, excluding cleanup materials.

B. Operational Restrictions

1. When employing only polyester resins in R003, the amount of polyester resin employed in this emissions unit shall not exceed the following limits:

	Gal./hour	TPH	Gal./day	TPD
spray	8.24	0.038	41.21	0.19
filament winding	10.87	0.050	54.35	0.25
manual layup	14.14	0.065	70.70	0.33

2. When employing only vinyl ester resins in R003, the amount of vinyl ester resin employed in this emissions unit shall not exceed the following limits:

	Gal./hour	TPH	Gal./day	TPD
spray	5.68	0.025	28.38	0.12
filament winding	9.04	0.039	45.21	0.20
manual layup	10.91	0.047	54.57	0.24

3. When employing only gelcoats in R003, the amount of gelcoat employed for this emissions unit shall not exceed the following limits:

	Gal./hour	TPH	Gal./day	TPD
spray + manual layup	4.19	0.023	20.94	0.11

4. The density and styrene content of the materials employed in emissions unit R003 shall not exceed the following limits:

	Lbs. /gallon	Styrene %, by weight
polyester resins	9.20	40.0
vinyl ester resins	8.67	48.0
gelcoats	10.87	30.8

5. The methyl methacrylate content of the gelcoats employed in emissions unit R003 shall not exceed 5.0 %.
6. The amount of cleanup material evaporated in this emissions unit shall not exceed 2 gallons per day and 730 gallons per year.
7. The OC content of the cleanup materials employed in emissions unit R003 shall not exceed 6.6 lbs. OC per gallon, as applied.
8. The use of photochemically reactive cleanup materials as defined in OAC rule 3745-21-01(C)(5) is prohibited.
9. The permittee shall install a vertical stack with a height, exit gas velocity, and diameter such that the requirements of the Ohio EPA Air Toxics Policy and the allowable emissions of toxic pollutants can be met. Note: HCDES successfully modeled styrene emissions (passing the MAGLC limit) using an 18 foot stack height, 2000 foot/minute exit velocity, and stack diameter of 1.5 feet. The permittee shall notify this agency if any of these parameters are changed or a rain cap added so that compliance can be determined.

C. Monitoring and/or Recordkeeping Requirements

1. The permittee shall collect and record the following information for each hour for this emissions unit:
 - a. The company identification and density of each coating (by type of resin and gelcoat) employed.
 - b. The number of pounds/tons and gallons of each coating material employed for each method of application.
 - c. The percent, by weight, styrene of each coating employed in this emissions unit.
 - d. The percent, by weight, methyl methacrylate of each coating employed in this emissions unit.
 - e. The emissions factor, in pounds of styrene and/or methyl methacrylate emitted per ton of resin or gelcoat processed, for each method of application as outlined in the Unified Emissions Factors for Open Molding of Composites table, April 7, 1999.

- f. The total number of hours the emissions unit was in operation for each application method.
- g. The total organic compound emission rate for all coatings employed, in pounds per hour (b x e) (for both styrene and methyl methacrylate).
- h. The total organic compound emission rate for all coatings employed, in pounds per day (summation of the hourly emissions from g).

[Note: The coating information must be for the coatings as employed, including any thinning solvents added at the emission unit. Also the definition of "nonphotochemically reactive" is based upon OAC rule 3745-21-01(C)(5).]

- 2. The permittee shall collect and record the following information for each day for this emissions unit:
 - a. The company identification of each cleanup material employed.
 - b. The number of gallons of cleanup material employed per day.
 - c. The organic compound content of the cleanup material , in pounds per gallon.
 - d. The total organic compound emission rate (b*c) for all cleanup material, in pounds per day.
 - e. A record of each cleanup material employed in this emissions unit indicating, whether or not the liquid organic material is photochemically reactive as identified in OAC rule 3745-21-01(C)(5).
- 3. The permittee shall collect and record the following information each month for the entire facility:
 - a. The name and identification number of each HAP* containing material employed.
 - b. The amount of each HAP containing material employed, in pounds.
 - c. The total individual HAP emissions for each HAP from all HAP containing materials employed, in pounds or tons per month. (This shall be calculated by using the appropriate emissions factor for each individual HAP for each HAP containing material).
 - d. The total combined HAP emissions from all HAP containing material employed, in pounds

Emissions Unit ID: **R003**

or tons per month. [This shall be calculated by adding the emissions from (c) for each individual HAP emitted].

- e. The updated rolling, 12-month summation for individual HAP emissions for each HAP, in pounds or tons. This shall include the information for the current month and the preceding eleven calendar months.
- f. The updated rolling, 12-month summation for total combined HAP emissions, in pounds or tons. This shall include the information for the current month and the preceding eleven calendar months.

* A listing of the HAPs can be found in Section 112(b) of the Clean Air Act or can be obtained by contacting your Hamilton County Department of Environmental Services contact. This information does not have to be kept on a line-by-line basis.

- 4. The permit to install for this emissions unit (R003) was evaluated based on the actual materials (typically coatings and cleanup materials) and the design parameters of the emissions unit's exhaust system, as specified by the permittee in the permit to install application. The Ohio EPA's "Review of New Sources of Air Toxic Emissions" policy ("Air Toxic Policy") was applied for each pollutant emitted by this emissions unit using data from the permit to install application and the SCREEN 3.0 model (or other Ohio EPA approved model). The predicted 1-hour maximum ground-level concentration from the use of the SCREEN 3.0 model was compared to the Maximum Ground-Level Concentration (MAGLC).

The following summarizes the results of the modeling for the "worst case" pollutant(s):

Pollutant: Styrene

TLV (ug/m3): 85,000

Maximum Hourly Emission Rate (lbs/hr): 16.0

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 1876.1

MAGLC (ug/m3): 2024

Physical changes to or in the method of operation of the emissions unit after it's installation or modification could affect the parameters used to determine whether or not the "Air Toxics Policy" is satisfied. Consequently, prior to making a change that could impact such parameters, the permittee shall conduct an evaluation to determine that the "Air Toxic Policy" will still be satisfied. If, upon evaluation, the permittee determines that the "Air Toxic Policy" will not be satisfied, the permittee will not make the change. Changes that can affect the parameters used in the "Air Toxic Policy" include the following:

- a. changes in the composition of the materials used (typically for coatings or cleanup

materials), or the use of new materials, that would result in the emission of a compound with a lower Threshold Limit Value (TLV), as indicated in the most recent version of the handbook entitled "American Conference of Governmental Industrial Hygienists (ACGIH)," than the lowest TLV value previously modeled;

- b. changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any pollutant with a listed TLV that was proposed in the application and modeled: and
- c. physical changes to the emissions unit or its exhaust parameters (e.g., increased/decreased exhaust flow, changes in stack height, changes in stack diameter, etc.).

If the permittee determines that the "Air Toxic Policy" will be satisfied with the above changes, the Ohio EPA will not consider the change(s) to be a "modification" under OAC rule 3745-31-01(VV)(1)(a)(ii), and a modification of the existing permit to install will not be required. If the change(s) is(are) defined as a modification under other provisions of the modification definition [other than (VV)(1)(a)(ii)], then the permittee shall obtain a final permit to install prior to the change.

The permittee shall collect, record, and retain the following information when it conducts evaluations to determine that the changed emissions unit will satisfy the Air Toxic Policy:"

- a. a description of the parameters changed (composition of materials, new pollutants emitted, change in stack/exhaust parameters, etc.);
 - b. documentation of its evaluation and determination that the changed emissions unit still satisfies the "Air Toxic Policy"; and
 - c. when the computer modeling is performed, a copy of the resulting computer model runs that show the results of the application of the "Air Toxic Policy" for the change.
5. The permittee shall maintain monthly records of the OC emissions from the coatings for this emissions unit. The OC emissions shall be summarized in tons per year at the end of each calendar year.

D. Reporting Requirements

- 1. The permittee shall submit deviation (excursion) reports which include the following information for this emissions unit:
 - a. An identification of each day during which the hourly organic compound emissions from

Emissions Unit ID: **R003**

the coatings exceeded 8 pounds per hour, and the actual hourly organic compound emissions for each such day.

- b. An identification of each day during which the organic compound emissions from the coatings exceeded 40 pounds per day, and the actual organic compound emissions for each such day.
2. The permittee shall submit deviation (excursion) reports which identify all exceedances of the usage limitations in term B.1, B.2., B.3. and B.6.
3. The permittee shall submit deviation reports which identify all exceedances of the density, styrene content, methyl methacrylate and cleanup material OC content limitations in term B.4, B.5, and B.7.
4. The permittee shall notify the Hamilton County Department of Environmental Services of any exceedance of the HAP emissions limitations set forth in term A.2.b. The permittee shall submit annual reports which identify all exceedances of these limitations, as well as the corrective actions that were taken to achieve compliance. These reports shall be submitted by January 31 of each year. If no exceedances occurred during the reporting period then a report is required stating so.
5. The permittee shall submit annual reports which specify the total organic compound emissions from emissions unit R003 for the previous calendar year. This report shall list the emissions from the coatings and cleanup materials separately. These reports shall be submitted by January 31 of each year.
6. The permittee shall notify the Hamilton County Department of Environmental Services in writing identifying each day during which any photochemically reactive cleanup material [as defined in OAC rule 3745-21-01(C)(5)] was employed in this emissions unit. This report shall identify the cause for the use of the photochemically reactive material(s) and the estimated total quantity of organic compound emissions emitted each such day. This report shall be submitted to the Hamilton County Department of Environmental Services within 45 days after the exceedance occurs.
7. Unless specified, the deviation reports shall be submitted in accordance with the reporting requirements of the General Terms and Conditions of this permit.

E. Testing Requirements

1. Compliance with the OC emission limitations for this emissions unit shall be demonstrated by the following: $\text{OC emissions rate} = \frac{\text{sum of gelcoat OC emissions/unit time} + \text{resin OC emissions/unit time}}{\text{Emission factors vary by the application method used. This includes the}}$

styrene and methyl methacrylate.

Lbs. coating used /hour = gallons coating used/hour X coating density (lbs./gallon)

- a. Lbs./hr OC emissions = [Lbs. gel coat/hr X ton/2000 lbs. X emission factor (lbs/ton)]+
[Lbs. resin/hr X ton/2000 lbs. X emission factor (lbs/ton)]
- b. Lbs./day OC emissions = [Lbs. gel coat/day X ton/2000 lbs. X emission factor (lbs/ton)]
+ [Lbs. resin/day X ton/2000 lbs. X emission factor (lbs/ton)]
- c. TPY OC emissions = (tons gel coat/year X ton/2000 lbs. X emission factor (lbs/ton)) +
(tons resin/year X ton/2000 lbs. X emission factor (lbs/ton))

The emissions factor, in pounds of styrene emitted per ton of resin or gelcoat processed, for each method of application is outlined in the Unified Emissions Factors for Open Molding of Composites table, April 7, 1999.

2. Compliance with the usage restrictions in term B.1., B.2., B.3. and B.6. shall be demonstrated by the recordkeeping in term C.1. and C.2.
3. Compliance with the styrene content, methyl methacrylate content, density, and OC content for the cleanup materials in term B.4., B.5. and B.7. shall be demonstrated by the recordkeeping in term C.1. and C.2.
4. Formulation data or USEPA method 24 shall be used to determine the OC contents of the coatings.
5. Compliance with the HAPs limitations in term A.2.b. shall be demonstrated by the recordkeeping in term C.3.
6. Compliance with term B.8 shall be demonstrated by the record keeping in term C.2.

F. Miscellaneous Requirements

1. The terms and conditions in this permit to install shall supercede PTI 14-2443 issued on July 21, 1993.
2. The following terms and conditions of this permit are federally enforceable: A., B.1 - B.9, C.1. - C.3., C.5, D and E.

NEW SOURCE REVIEW FORM B

PTI Number: 14-05081

Facility ID: 1409000699

FACILITY NAME Marine Biotech, Inc.

FACILITY DESCRIPTION Two stations for sprav. filament winding. CITY/TWP Shandon, Ohio

Emissions Unit ID: **R003**SIC CODE 3089 SCC CODE 3-08-007-20, 22, 24 EMISSIONS UNIT ID R002

EMISSIONS UNIT DESCRIPTION Spray, filament winding, and hand layup station for fabrication of fiberglass parts

DATE INSTALLED October 1991

EMISSIONS: (Click on bubble help for Air Quality Descriptions)

Pollutants	Air Quality Description	Actual Emissions Rate		PTI Allowable	
		lbs./hour	Tons Per Year	lbs./hour	Tons Per Year
Particulate Matter					
Sulfur Dioxide					
Organic Compounds	attainment	8 (coatings) 13.2 lbs./day (cleanup)	4.95 (coatings) 2.2 (cleanup)	8 (coatings) 13.2 lbs./day (cleanup)	4.95 (coatings) 2.4 (cleanup)
Nitrogen Oxides					
Carbon Monoxide					
Lead					
Other: Air Toxics					

APPLICABLE FEDERAL RULES:

NSPS? No

NESHAP? No

PSD? No

OFFSET POLICY? No

WHAT IS THE BAT DETERMINATION, AND WHAT IS THE BASIS FOR THE DETERMINATION?**Enter Determination** Best Available Technology is satisfied by usage restrictions, emissions limitations, and compliance with the Ohio Air Toxics Policy.IS THIS SOURCE SUBJECT TO THE AIR TOXICS POLICY? yesOPTIONAL: WHAT IS THE CAPITAL COST OF CONTROL EQUIPMENT? \$NA**TOXIC AIR CONTAMINANTS**

Ohio EPA's air toxics policy applies to contaminants for which the American Conference of Governmental Industrial Hygienists (ACGIH) has a listed threshold limit value.

AIR TOXICS MODELING PERFORMED*? X YES NOIDENTIFY THE AIR CONTAMINANTS: styrene, MMA

NEW SOURCE REVIEW FORM B

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		Lbs./hour	Tons Per Year	Lbs./hour	Tons Per Year
Particulate Matter					
PM ₁₀					
Sulfur Dioxide					
Organic Compounds	attainment	8 (coatings) 13.2 lbs./day (cleanup)	4.95 (coatings) 2.2 (cleanup)	8 (coatings) 13.2 lbs./day (cleanup)	4.95 (coatings) 2.4 (cleanup)
Nitrogen Oxides					
Carbon Monoxide					
Lead					
Other: Air Toxics					

APPLICABLE FEDERAL RULES:

NSPS? No

NESHAP? No

PSD? No

OFFSET POLICY? No

WHAT IS THE BAT DETERMINATION, AND WHAT IS THE BASIS FOR THE DETERMINATION?**Enter Determination** Best Available Technology is satisfied by usage restrictions, emissions limitations, and compliance with the Ohio Air Toxics Policy.IS THIS SOURCE SUBJECT TO THE AIR TOXICS POLICY? YesOPTIONAL: WHAT IS THE CAPITAL COST OF CONTROL EQUIPMENT? \$NA**TOXIC AIR CONTAMINANTS**

Ohio EPA's air toxics policy applies to containinants for which the American Conference of Governmental Industrial Hygienists (ACGIH) has a listed threshold limit value.

AIR TOXICS MODELING PERFORMED*? X YES NOIDENTIFY THE AIR CONTAMINANTS: styrene, MMA

Ohio EPA Permit to Install Information Form Please describe below any documentation which is being submitted with this recommendation (must be sent the same day). Electronic items should be submitted with the e-mail transmitting the PTI terms, and in software that CO can utilize. If mailing any hard copy, this section must be printed as a cover page. All items must be clearly labeled indicating the PTI name and number. Submit **hard copy items to Pam**

26 **NEW SC**

PTI Num

FACILITY

Emissions Unit ID: **R003**

FACILITY DESCRIPTION Two stations for spray, filament winding, and hand layup of composite fiberglass parts

CITY/TWP Shandon, Ohio

McGraner, AQM&P, DAPC, Central Office, and electronic files to airpti@epa.state.oh.us

Please fill out the following. If the checkbox does not work, replace it with an 'X'

	<u>Electronic</u>	<u>Additional information File Name Convention (your PTI # plus this letter)</u>	<u>Hard Copy</u>	<u>None</u>
<u>Calculations (required)</u>	<input type="checkbox"/>	0000000c.wpd	<input checked="" type="checkbox"/>	
<u>Modeling form/results</u>	<input type="checkbox"/>	0000000s.wpd	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<u>PTI Application (complete or partial)*</u>	<input type="checkbox"/>	0000000a.wpd	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<u>BAT Study</u>	<input type="checkbox"/>	0000000b.wpd	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<u>Other/misc.</u>	<input type="checkbox"/>	0000000t.wpd	<input type="checkbox"/>	<input checked="" type="checkbox"/>

* Mandatory for netting, PSD, nonattainment NSR, 112(g), 21-07(G)(9)(g) and 21-09(U)(2)(f) - 2 complete copies.

Please complete (see comment bubble to the left for additional instructions):

NSR Discussion

Permit Review Narrative

PTI 14-05081

Marine Biotech, Inc.

5009A Cincinnati-Brookville Road

Shandon, Ohio 45063

PN: 1409000699

Marine Biotech, Inc. fabricates open-molded fiberglass parts using spray guns, filament winding, and manual layup. This permit application is for two fabrication stations, OEPA ID R002 and R003. Previously, the two stations were permitted as one station - OEPA ID P001. P001 will be removed from the list of emissions units at this facility. The facility has been in operation since October 1991.

Applicable regulations include:

OAC rule 3745-31-05(A)(3) which requires the use of BAT. Best Available Technology is satisfied by resin, gelcoat, and cleanup usage restrictions, emissions limitations, and compliance with the Ohio Air Toxics Policy.

OAC rule 3745-21-07(G)(2) which limits OC emissions to 8 pounds per hour and 40 pounds per day of OCs.

OAC rule 3745-15-07 which prohibits air pollution nuisances.

The permittee requested that emissions be broken out by method of application to maximize allowable usages of materials. The permittee will track resin, gelcoat, and cleanup material usages for each station. Coatings at this facility do not use vapor suppressants. Through this synthetic minor permit, HAPs will be limited to 9.9 tons per year for any single HAP and 24.9 tons per year for combined HAPs at the facility, as a rolling 12 month summation. Styrene in resins

NEW SOURCE REVIEW FORM B

PTI Number: 14-05081

Facility ID: 1409000699

FACILITY NAME Marine Biotech, Inc.

FACILITY DESCRIPTION Two stations for sprav. filament winding. CITY/TWP Shandon, Ohio

Emissions Unit ID: **R003**

and gelcoats and methyl methacrylate in the gelcoats are the main HAPs of concern. Acetone is used for cleanup.

Emissions factors were obtained from Table 3 - Unified Emissions Factors for Open Molding of Composites (April 7, 1999). The emissions factors were developed by the Composites Fabricators Association (CFA) and the National Marine Manufacturers Association (NMMA).

Fees: Based on 0.065 TPH or 130 pounds per hour PWR per station, the permit fee for the two stations is
 $2 \times \$200.00 = \400.00

Barbara Kerdolff
March 26, 2001

Please complete for these type permits (For PSD/NSR Permit, place mouse over this text):

Synthetic Minor Determination and/or **Netting Determination**
Permit To Install **14-05081**

A. Source Description

Marine Biotech, Inc. fabricates open-molded fiberglass parts using air assisted spray guns, filament winding, and manual layup. This permit application is for two fabrication stations, OEPA ID R002 and R003. Previously, the two stations were permitted as one station - OEPA ID P001. P001 will be removed from the list of emissions units at this facility.

B. Facility Emissions and Attainment Status

This facility is located in western Butler County, Ohio. Butler County is classified as attainment for all pollutants subject to the National Ambient Air Quality Standards (NAAQS), including NO_x, SO_x, PM, CO, ozone, and lead.

C. Source Emissions

The permittee will track total resin, gelcoat, and cleanup material usage for each station. Without permit restrictions, potential HAPs emissions are 8 lbs./hour X 8760 hours /year X 0.005 ton/lb X two = 70.08 TPY for the two stations. Through this synthetic minor permit, HAPs will be limited to 9.9 tons per year for any single HAP and 24.9 tons per year as a rolling, 12-month summation for combined HAPs at the facility. Styrene in resins and gelcoats and methyl methacrylate in the gelcoats are the HAPs emitted. HAPs in the catalyst and cobalt 2-ethylhexanote in the gelcoats react with the respective coatings to initiate polymer crosslinking and are not emitted per the coating suppliers. Acetone is used for cleanup.

Marine Biotech, Inc. is accepting an OC emission limit of 4.95 TPY for each emissions unit, R002 and R003.

NEW SOURCE REVIEW FORM B

PTI Number: 14-05081

Facility ID: 1409000699

FACILITY NAME Marine Biotech, Inc.

FACILITY DESCRIPTION Two stations for sprav. filament winding. CITY/TWP Shandon, Ohio

Emissions Unit ID: **R003**

Since OC emissions from coatings are equivalent to HAPs emissions at this facility, the 4.95 TPY limit is required so that the facility can meet the annual HAPs limits in this permit. This brings the facility OC emissions to a total of 9.9 TPY OC. The facility will keep records and submit reports as described in the PTI to ensure compliance with the emission limits.

D. Conclusion

With the federally enforceable terms contained in this permit, the permittee's potential to emit will be limited to less than 100 tons per year of OC, less than 10 tons per year of a single HAP and less than 25 tons per year of combined HAPs. As a result, Marine Biotech, Inc. will not be considered a major facility for the purpose of Title V permitting or MACT.

PLEASE PROVIDE ADDITIONAL NOTES OR COMMENTS AS NECESSARY:

NONE

Please complete:

SUMMARY (for informational purposes only)
TOTAL PERMIT TO INSTALL ALLOWABLE EMISSIONS

Pollutant
OC

Tons Per Year
14.7