

Determination of Maximum Achievable Control Technology (MACT)
Dougherty Marine Partnership a.k.a. Edgewater Powerboats
Dale Street Facility

The applicant, Edgewater Powerboats, proposes to begin manufacturing fiberglass fishing boats (14 to 26 feet in length) at 211 Dale Street, Edgewater, Volusia County, Florida.

The estimated annual tonnage of regulated hazardous air pollutants (HAPs) to be emitted is as follows:

Pollutants	Potential Emissions (tons/year)	MACT Significant Emission Rate (tons/year)
Styrene	> 10	10
Methyl ethyl ketone (MEK)	< 0.2	10
Total HAPs	> 25	25

Florida Administrative Code Rule 62-204.800(10)(d)2 requires a MACT review for all major sources of HAPs that are to be constructed or reconstructed, unless:

1. the source is specifically regulated or exempted from regulation under a standard issued pursuant to Section 112(d) "emission Standards," Section 112(h) "Work Practice Standards and Other Requirements," or Section 112(j) "Equivalent Emission Limitation by Permit," and incorporated in another subpart of 40 CFR Part 63; or
2. the owner or operator of the major source received an air construction permit for the construction or reconstruction project before July 1, 1997, or the source was constructed or reconstructed before July 1, 1997.

MACT Determination Requested by the Applicant

- A. Use of resins that contain a maximum average of 35% styrene, based on Manufacturer's Safety Data Sheets (MSDS), with compliance determined on a 3-month rolling average.
- B. Use of base gel coats and pigmented gel coats that contain a maximum average of 35% styrene, based on Manufacturer's Safety Data Sheets (MSDS), with compliance determined on a 3-month rolling average.
- C. Use of clear gel coats that contain a maximum average of 48% styrene, based on Manufacturer's Safety Data Sheets (MSDS), with compliance determined on a 3-month rolling average.
- D. Use of non-atomizing resin applicators (Magnum Industries' Fluid Impingement Technology (FIT)).
- E. Use of resin and gel coat cleaning solvents that do not contain HAPs.

Dougherty Marine Partnership does not use marine coating, interior wood parts, carpets or fabrics in its production of boats and boat parts.

MACT Determination Procedure

In accordance with 40 CFR 63 Subpart B, which was adopted in Florida Administrative Code Chapter 62-204, *Maximum Achievable Control Technology (MACT) emission limitation for new sources* means the emission limitation which is not less stringent than the emission limitation achieved by the best controlled similar source, and which reflects the maximum degree of (r)eduction in emissions that the permitting authority, taking into consideration the cost of achieving such emission reduction, and any non-air quality health and environmental impacts and energy requirements, determines is achievable by the constructed source.

Similar source means a stationary source or process that has comparable emissions and is structurally similar in design and capacity to a constructed or reconstructed source such that the source could be controlled using the same control technology.

In addition, the regulations state that in making the MACT Determination, the Department should give consideration to:

- (a) Any Environmental Protection Agency proposed relevant emission standard pursuant to section 112(d) or section 112(h) of the Act or an adopted presumptive MACT determination for the source category which includes the constructed or reconstructed major source.
- (b) Available information as defined in 40 CFR 63.41.

EPA is currently working on a proposed MACT for reinforced boat manufacturing sources. Add-on control devices have been considered, but at this point in time, the MACT for new and reconstructed sources is expected to be equivalent to:

1. the use of production resins that contain a maximum average of 35% total HAP content, based on Manufacturer's Safety Data (MSD) Sheets, with compliance determined on a 3-month rolling average;
2. the use of non-atomizing application equipment for production resins;
3. the use of pigmented gel coats and base gel coats that contain a maximum average of 33% total HAP content, based on Manufacturer's Safety Data (MSD) Sheets, with compliance determined on a 3-month rolling average;
4. the use of clear gel coats that contain a maximum weighted average of 48% total HAP content, based on MSDS, with compliance determined on a 3-month rolling average;

5. the use of sprayed tooling resins, used for repair of molds, that contain a maximum average of 30% total HAP content, based on Manufacturer's Safety Data (MSD) Sheets, with compliance determined on a 3-month rolling average;
6. the use of non-atomized tooling resins, used for making and repair of molds, that contain a maximum average of 39% total HAP content, based on Manufacturer's Safety Data (MSD) Sheets, with compliance determined on a 3-month rolling average;
7. the use of tooling gel coats, used for making and repair of molds, that contain a maximum average of 40% total HAP content, based on Manufacturer's Safety Data (MSD) Sheets, with compliance determined on a 3-month rolling average;
8. no control of hazardous air pollutants emitted from mold sealing, releasing, stripping, and repair materials;
9. no control of hazardous air pollutants emitted from wood coating;
10. the use of resin and gel coat cleaning solvents that contain no HAPs;
11. the use of carpet and fabric adhesives that contain no HAPs;
12. no control on the use of carpentry adhesives;
13. the use of the highest styrene content in calculations when Manufacturer's Safety Data (MSD) Sheets with styrene content ranges are used.

MACT Determination

After reviewing the applicant's proposed MACT, information from EPA, information concerning facilities permitted in other states, and existing NESHAP standards, the Department has made the determination that Maximum Achievable Control Technology (MACT) for this facility shall be:

1. the use of production resins that contain a maximum average of 35% total HAP content, based on Manufacturer's Safety Data (MSD) Sheets, with compliance determined on a 3-month rolling average;
2. the use of non-atomizing application equipment for production resins;
3. the use of pigmented gel coats and base gel coats that contain a maximum average of 33% total HAP content, based on Manufacturer's Safety Data (MSD) Sheets, with compliance determined on a 3-month rolling average;

4. the use of clear gel coats that contain a maximum weighted average of 48% total HAP content, based on MSDS, with compliance determined on a 3-month rolling average;
5. the use of sprayed tooling resins, used for repair of molds, that contain a maximum average of 30% total HAP content, based on Manufacturer's Safety Data (MSD) Sheets, with compliance determined on a 3-month rolling average;
6. the use of non-atomized tooling resins, used for making and repair of molds, that contain a maximum average of 39% total HAP content, based on Manufacturer's Safety Data (MSD) Sheets, with compliance determined on a 3-month rolling average;
7. the use of tooling gel coats, used for making and repair of molds, that contain a maximum average of 40% total HAP content, based on Manufacturer's Safety Data (MSD) Sheets, with compliance determined on a 3-month rolling average;
8. no control of hazardous air pollutants emitted from mold sealing, releasing, stripping, and repair materials;
9. no control of hazardous air pollutants emitted from coating processes for exterior wood parts.
10. the use of resin and gel coat cleaning solvents that contain no HAPs. An exception is the use solvent cleaning machines which comply with the requirements of 40 CFR 63 Subpart T- Halogenated Solvent Cleaning.
11. the use of carpentry adhesives that achieve a volatile hazardous air pollutant (VHAP) limit for contact adhesives, excluding aerosol adhesives and excluding contact adhesives applied to nonporous substrates, of no greater than 0.2 kg VHAP/kg solids (0.2 lb VHAP/lb solids), as applied using either of the compliance methods in 40 CFR 63.804(e).
12. the use of the highest styrene content in calculations when Manufacturer's Safety Data (MSD) Sheets with styrene content ranges are used.

Dougherty Marine Partnership may request alternative emissions standards in lieu of the above standards. For the FDEP to approve a request for alternative emissions standards, Dougherty Marine Partnership must satisfy requirements, not limited to but including the following:

- a. provide reasonable assurance of the of the resulting emissions being equivalent to FDEP's MACT level;
- b. propose a method of demonstrating compliance; and,
- c. propose a means of demonstrating on-going compliance.

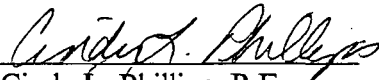
Recordkeeping and Reporting Requirements:

1. Dougherty Marine Partnership shall compile records on a monthly basis and maintain those records for a minimum of 5 years. At a minimum, these records shall include:
 - a. the identification of all coatings used (resins, gelcoats, marine coatings, adhesives, etc.),
 - b. certification of the as-supplied HAP/VOC content of each batch of coating,
 - c. certification of the as-applied HAP/VOC content of each batch of coating,
 - d. the volume of each coating applied,
 - e. amount of thinner used, and
 - f. determination of compliance with the appropriate HAP limit.
2. Within 60 days following the end of each 6-month period after startup, Dougherty Marine Partnership shall submit a semi-annual compliance report.

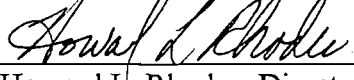
Details of the Determination may be Obtained by Contacting:


Cindy L. Phillips, P.E.
MS 5505
Bureau of Air Regulation
Department of Environmental Protection
2600 Blair Stone Road, MS #5505
Tallahassee, Florida 32399-2400

Recommended by:


Cindy L. Phillips, P.E. 7/6/00
Date
Air Toxics/Title III Section
Bureau of Air Regulation

Approved by:


Howard L. Rhodes, Director 7/12/00
Date
Division of Air Resources
Management


C. H. Fancy, P.E. 7/10/00
Date
Chief
Bureau of Air Regulation

Dougherty Marine
P.O. Box 790
Edgewater, FL 32132
904-426-5457
Fax 904-427-9783

EdgeWater

POWERBOATS

April 11, 2000

Florida Dept. of Environmental Protection
Central District
3319 Maguire Blvd, Suite 232
Orlando, Florida 32803-3767

Attention: Air Permitting Section



RECEIVED

MAY 03 2000

BUREAU OF AIR REGULATION

SUBJECT: Dougherty Marine Partnership, aka Edgewater Powerboats, New Air Construction Permit Application for a Title V Source

Our company is currently located at 201 North Flagler in Edgewater, FL 32132. We manufacture boats using fiberglass reinforced plastics (FRP). We have an active Title V permit - Permit No. 1270104-003-AV. The sole focus of this permit is the styrene emissions associated with our manufacturing process and we exceed the Title V threshold for these emissions.

In February we forwarded a letter to the Department inquiring if we could transfer this permit to a different existing facility since our lease at our current facility was to expire. The Department responded indicating that a new construction permit application was required even though the facility we intend to move to is an existing facility. Enclosed please find our permit application for this "new" facility which is located on Dale Street in Edgewater. The data enclosed should include the 4 copies of the ELSA disks along with supporting information on these same disks in Adobe Acrobat format (file name DMPTV.pdf), our application fee of \$2,000, and the requisite hard copy forms required for the application.

Nelson Engineering Co. of Titusville is our engineer of record. Please contact them if you have any technical questions.

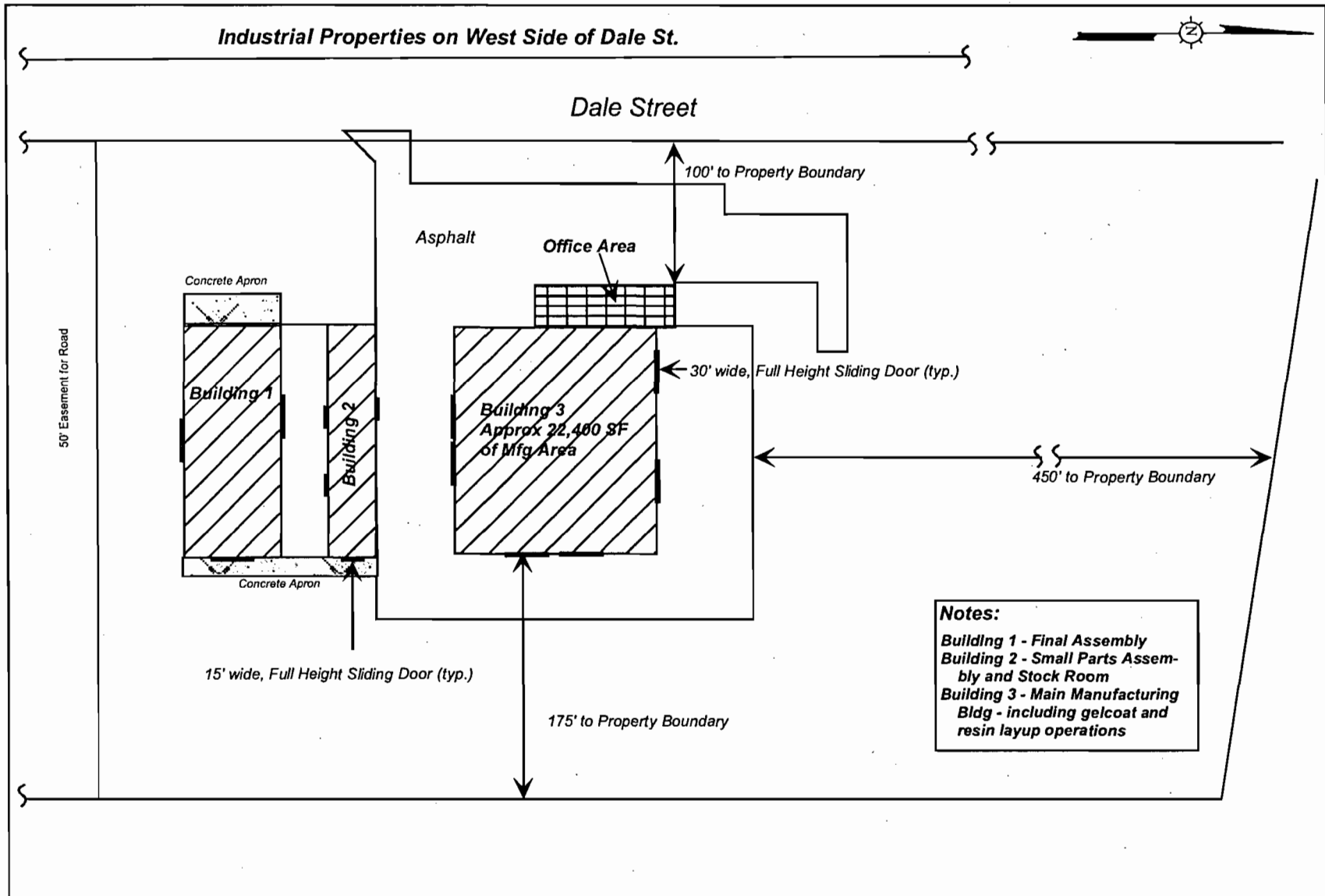

Sincerely,

Peter Truslow, President
Dougherty Marine Partnership

Note: See Appendix 5 for a paper copy of the application that was submitted on disk.

**Appendix 1
Title V Permit Application
Edgewater Powerboats**

Figures and Photos

Nelson Engineering Co.

3655 Belle Arbor Circle
Titusville, FL 32780
(407)269-1113 Fax (407)269-0506
e-mail: b.nelson@NelsonEngrCo.com Website: http://www.NelsonEngrCo.com

Figure 2: Facility Plot Plan

Dougherty Marine Partnership Facility on Dale St.
Volusia County

Customer: Dougherty Marine Partnership	Engr: Nelson	Scale: 1"=100'
Date: April 6, 2000	Dwg No: IND-DMP-TV-002	Rev: New

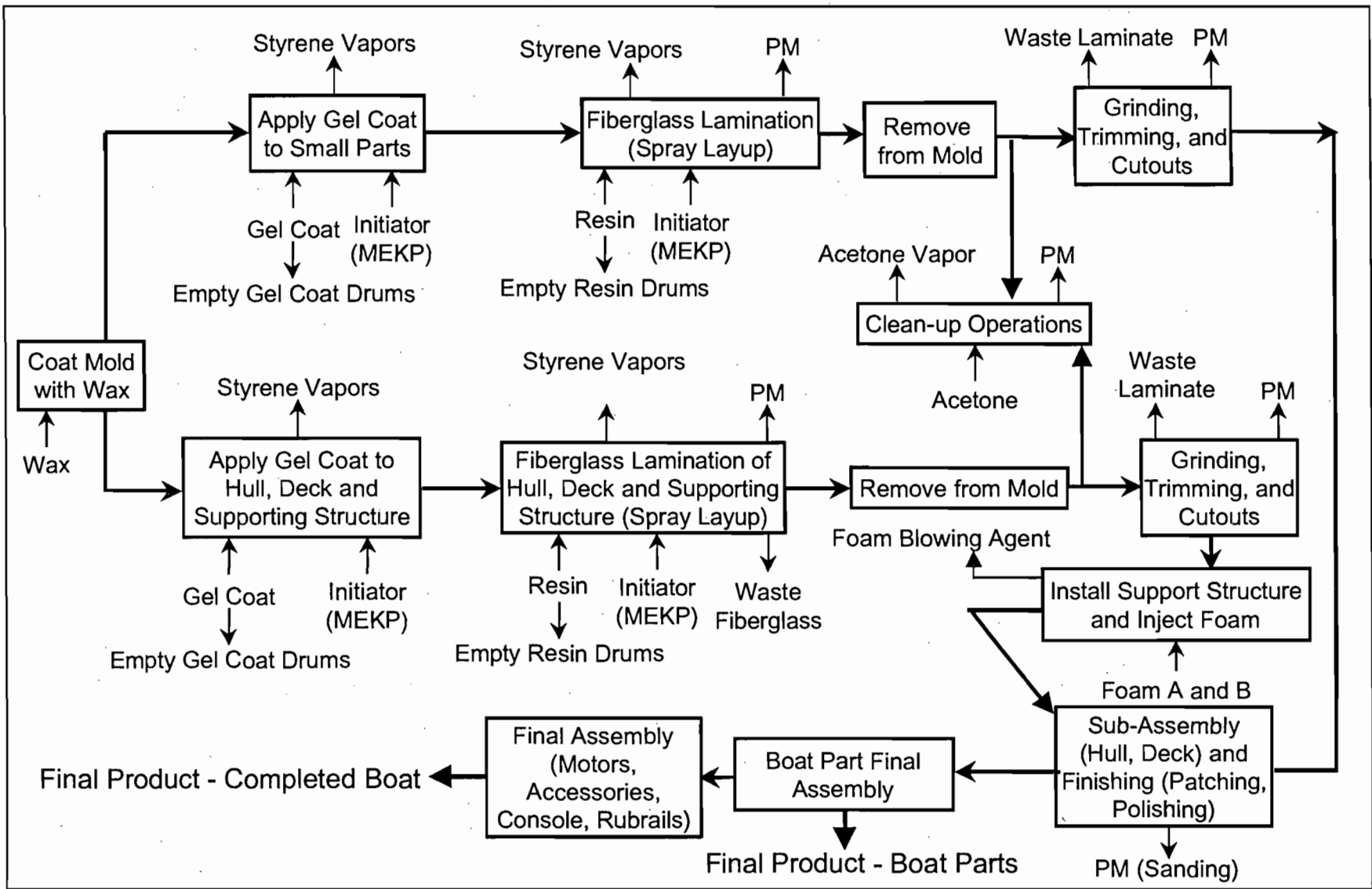


Figure 3: Process Flow Diagram

Nelson Engineering Co.
 3555 Belle Arbor Circle
 Titusville, FL 32780
 (407)269-1113 Fax (407)269-0506
 e-mail: netengr@digital.net Website: http://www.digital.net/netengr

Engr: B. Nelson	Customer: Edgewater Powerboats	Scale: None	
	Date: 4/1/00	Dwg No: IND-091-01-A	Rev: 1



Photo 1 Existing "new" Facility with Full Height Door

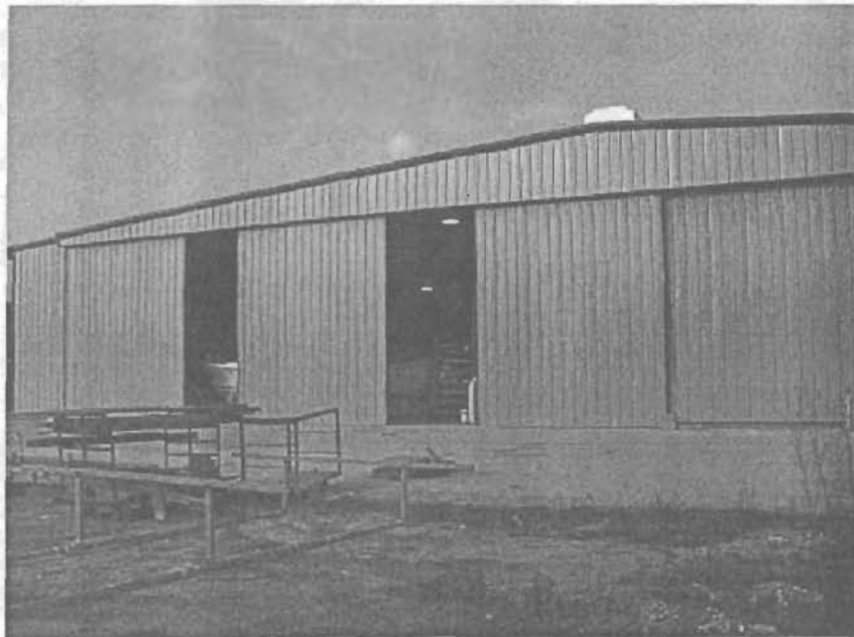


Photo 2 Existing "new" Facility with Full Height Door

Appendix 2 Title V Permit Application Edgewater Powerboats

Part A. Precautions to Prevent Unconfined Particulate Matter Emissions

Citation:

62-296.320 General Pollutant Emission Limiting Standards

(4)(c) Unconfined Emissions of Particulate Matter

3. Reasonable precautions include the following:

d. Removal of particulate matter from roads and other paved areas under the control of the owner or operator of the facility to prevent re-entrainment, and from buildings or work areas to prevent particulate from becoming airborne.

Grinding, trimming, and sanding operations will take place in building 2 and in between buildings 1 and 2 (shown on Figure 2). These operations generate particulate matter. Most of the particulate matter generated inside the building will not be airborne and will be routinely swept up and disposed of as a solid waste. The dust that is generated from any grinding between the buildings will be typically swept every other day and disposed of as solid waste. The area between buildings 1 and 2 is not an area where there is vehicular traffic that would cause the grinding dust to become airborne. Collectively, grinding inside building 2 and in between buildings 1 and 2 that are not subject to vehicular traffic fulfills the reasonable precaution described above.

Part B. Fugitive Emission Identification

Typically all air emissions from fiberglass boat and boat part manufacturing are fugitive emissions unless an exhaust system is installed to concentrate the emissions at a defined exhaust point. The Process Flow Diagram (Figure 3 in Appendix 1) shows the sources of all the emissions for the boat building process of the applicant. Appendix 4 quantifies the exempt source emissions (particulate matter, miscellaneous styrene, and methyl ethyl ketone). Styrene emissions calculations are contained in the permit application Emissions Unit Detail Information section. All styrene and methyl ethyl ketone emissions are generated in the main production buildings (buildings 1 and 3 on the Plot Plan, Figure 2, Appendix 1). Particulate matter is generated in building 2 and in between buildings 1 and 2, as described in Part A above.

Styrene Emission Calculations:

Reference: DARM-PER/GEN-37, Guidance on the Use of Styrene Emission Factors for Certain Polyester Resin Plastics Product Fabrication Processes

	<u>1999</u>	<u>% Styrene</u>	<u>Emission Factor</u>	<u>1999 Styrene Emissions</u>	<u>Old Calcs</u>
Resin (Spray Lay-up)	518150	35	0.16	29016.4	19948.775
Gel Coat	89465	35	0.48	15030.12	9706.9525
					29655.7275
				44046.52	TOTAL Lbs
				22.02	TPY
	<u>Max Proposed</u>				
Resin (Spray Lay-up)	1110000	35	0.16	62160	
Gel Coat	205000	35	0.48	34440	
				96600	TOTAL Lbs
				48.30	TPY

**Appendix 3
Title V Permit Application
Edgewater Powerboats
Supplemental Information for Construction Permit**

A. Description of Operation

Edgewater Powerboats builds fiberglass boats and boat parts. Their boats are open craft that range from 14' to 26' in length. They currently operate in a leased facility located at 201 North Flagler in Edgewater, Florida. The lease is to expire and they intend to relocate their operation to a different leased facility located at 211 Dale St. in Edgewater, FL. The "new" facility is an existing building. A site plan for this "new" facility is shown as Figure 2 in Appendix 1. The process flow diagram (Figure 3, Appendix 1) details the operational steps, materials used, and wastes generated. The major raw materials are resin, which is delivered in bulk and stored in a tank, and gel coat, which is delivered and stored in 55 gallon drums.

B. Project Description

The project entails having Edgewater Powerboats relocate its operations from the existing permitted facility to the "new" leased facility. No new actual construction is planned for the "new" facility. It is intended to be used in its current configuration. The planned operations areas of the "new" facility are shown on Figure 2 in Appendix 1. Styrene, a component of gel coat and resin and a Hazardous Air Pollutant (HAP), will be emitted from buildings 1 and 3 of the "new" facility in quantities greater than 10 tons per year. Thus, a Title V Air Permit is required. Edgewater Powerboats investigated the possibility of transferring its existing permit to the new facility. The FDEP responded via letter, OCD-AP-0082, that indicated that a new Title V Construction permit application along with a MACT analysis was needed. This application is in response to FDEP's letter.

C. Description of Facility Exhaust

The primary production area that will emit regulated HAPs (i.e. styrene) will be buildings 1 and 3 where all the gelcoat and layup operations are conducted. These buildings are 11,000 and 22,400 square foot (SF) structures that include 30' wide sliding doors. These are full height doors from the eave (approximately 25' in height) to the floor that were installed to facilitate air flow in the building (see MACT analysis for additional discussion on facility venting). An example of a full height door is shown in Photos 1 and 2. This facility is currently being used for fiberglass boat repair and building by a different corporation. The six doors in building 3 include two doors each on the north, east, and south sides as shown in Figure 2 in Appendix 1. Building 1 has 3 full height doors as also shown in Figure 2. The facility currently does not have a defined exhaust system (fans, vents, stacks, etc.). Ventilation in the building is accomplished with air flow through the doors and through a roof ridge vent. Since styrene fumes are heavier than air the roof ridge vent probably does not contribute appreciably to removing these vapors from the production area. The roof ridge vent mainly assists in cooling by providing a means for the hotter air to escape. Consequently for all intents and purposes the doors can be considered to be the primary means of styrene fume exhaust.

**Appendix 4
Title V Permit Application
Edgewater Powerboats
List of Proposed Exempt Activities**

List of process or production units and other pollutant-emitting devices eligible for exemption in accordance with the criteria of Rule 62-213.430(6), F.A.C. and requested to be exempted pursuant to Rule 62-213.420(3)(m), F.A.C.:

1. Particulate Matter

Exemption Limit: 5 tons per year

Operations such as grinding, sanding, and trimming are performed in the manufacture of fiberglass boats and boat parts. Figure 3 in Appendix 1 shows the processes where particulate matter (PM) is emitted. Grinding, sanding, and trimming are performed in building 2 and in between buildings 1 and 2 in an area not subject to vehicular traffic.

Emission Calculation:

Basis:

- 75 linear feet of fiberglass/hr undergoes PM-producing operations
- 3000 hours per year of operation (conservative assumption; sanding, grinding, trimming are not always in process when facility is operating)
- 1/2 inch of material undergoes PM-producing operations per linear foot (very conservative estimate)
- 3/16 inch depth is removed in PM-producing operations
- fiberglass particulates density = 122 lbs/ft³
- 50% of particles become airborne (conservative estimate since the majority of the particles are swept up and disposed as solid waste)
- Assume particulate filters are 50% efficient (conservative)

$3000 \text{ hours/year} \times 75 \text{ ft/hour} \times .5/12 \text{ ft} \times 3/16/12 \text{ ft} \times 50\% \times 122 \text{ lbs/ft}^3 \times 50\% = 4468 \text{ lbs/year} = 2.2 \text{ TPY}$

2. Other Styrene Emissions

Other products, such as deck and hull putty and transom pour, contain styrene and are used in small quantities in fiberglass boat and boat part manufacture. Total styrene emissions from these sources is estimated at less than 200 lbs/year.

3. VOC Emissions: Methyl Ethyl Ketone Peroxide (MEKP)

1.5 % MEKP is added to the resin and the gel coat as a catalyst. MEK, a VOC, is 3% of MEKP. The majority of the MEKP catalyzes and sets the resin with the MEKP being contained in the final cured hard product (fiberglass reinforced plastic).

Emission Calculation:

Even on a worst case condition, if all the MEK remained volatile were emitted the emissions would be:

$750,000 \text{ lbs/year resin and gel coat used} \times .015 \text{ (\% of MEKP used as a catalyst to set the resin)} \times .03 \text{ (\% of MEK to MEKP)} = 338 \text{ lbs/year MEK emitted.}$

Dougherty Marine Partnership
Title V AC Application
April 6, 2000

Appendix 5
Title V Permit Application
Edgewater Powerboats
Paper Copy of DEP Form 62-210.900(1) Printed from ELSA

Scope of Application

Emissions Unit ID	Description of Emissions Unit	Permit Type
No Id *	Styrene from fiberglass reinforced plastic boat building	+ AC

Purpose of Application and Category

Category I : All Air Operation Permit Applications Subject to Processing Under Chapter 62-213, F.A.C.

This Application for Air Permit is submitted to o

- Initial air operation permit under Chapter 62-213, F.A.C., for an existing facility which is classified as a Title V source.

- Initial air operation permit under Chapter 62-213, F.A.C., for a facility which, upon start up of one or more newly constructed or modified emissions units addressed in this application, would become classified as a Title V source.

Current construction permit number :
1270104-003-AV

- Air operation permit renewal under Chapter 62-213, F.A.C., for a Title V source.

Operation permit to be renewed :

- Air operation permit revision for a Title V source to address one or more newly constructed or modified emissions units addressed in this application.

Current construction permit number :

Operation permit to be revised :

- Air operation permit revision or administrative correction for a Title V source to address one or more proposed new or modified emissions units and to be processed concurrently with the air construction permit application.

Operation permit to be revised/corrected :

-] Air operation permit revision for a Title V source for reasons other than construction or modification of an emissions unit.

Operation permit to be revised :

Reason for revision :

Category II : All Air Operation Permit Applications Subject to Processing Under Rule 62-210.300(2)(b), F.A.C.

This Application for Air Permit is submitted to obtain :

-] Initial air operation permit under Rule 62-210.300(2)(b), F.A.C., for an existing facility seeking classification as a synthetic non-Title V source.

Current operation/construction permit number(s) :

-] Renewal air operation permit under Rule 62-210.300(2)(b), F.A.C., for a synthetic non-Title V source.

Operation permit to be renewed :

-] Air operation permit revision for a synthetic non-Title V source.

Operation permit to be revised :

Reason for revision :

Category III : All Air Construction Permit Applications for All Facilities and Emissions Units

This Application for Air Permit is submitted to obtain :

- Air construction permit to construct or modify one or more emissions units within a facility (including any facility classified as a Title V source).

Current operation permit number(s), if any :
1270104-003-AV

- Air construction permit to make federally enforceable an assumed restriction on the potential emissions of one or more existing, permitted emissions units.

Current operation permit number(s) :

- Air construction permit for one or more existing, but unpermitted, emissions units.

Category IV : All Non-Federally Enforceable Air Operation

This Application for Air Permit is submitted to o

Initial air operation permit for one or more existing, but previously unpermitted, emissions units.

Initial air operation permit for one or more newly constructed or modified

Current construction permit number :

Air operation permit revision to address one or more newly constructed or modified emissions units.

Current construction permit number :

Operation permit to be revised :

Air operation permit renewal.

Operation permit to be renewed :

4. Professional Engineer Statement :

I, the undersigned, hereby certify, except as particularly noted herein, that :*

(1) To the best of my knowledge, there is reasonable assurance that the air pollutant emissions unit(s) and the air pollutant control equipment described in this Application for Air Permit, when properly operated and maintained, will comply with all applicable standards for control of air pollutant emissions found in the Florida Statutes and rules of the Department of Environmental Protection; and

(2) To the best of my knowledge, any emission estimates reported or relied on in this application are true, accurate, and complete and are either based upon reasonable techniques available for calculating emissions or, for emission estimates of hazardous air pollutants not regulated for an emissions unit addressed in this application, based solely upon the materials, information and calculations submitted with this application.

If the purpose of this application is to obtain a Title V source air operation permit (check here [] if so), I further certify that each emissions unit described in this Application for Air Permit, when properly operated and maintained, will comply with the applicable requirements identified in this application to which the unit is subject, except those emissions units for which a compliance schedule is submitted with this application.

If the purpose of this application is to obtain an air construction permit for one or more proposed new or modified emissions units (check here [] if so), I further certify that the engineering features of each such emissions unit described in this application have been designed or examined by me or individuals under my direct supervision and found to be in conformity with sound engineering principles applicable to the control of emissions of the air pollutants characterized in this application.

If the purpose of this application is to obtain an initial air operation permit or operation permit revision for one or more newly constructed or modified emissions units (check here [] if so), I further certify that, with the exception of any changes detailed as part of this application, each such emissions has been constructed or modified in substantial accordance with the information given in the corresponding application for air construction permit and with all provisions contained in such permit.

Signature
(seal)

Date

* Attach any exception to certification statement.

I. Part 6 - 1

DEP Form No. 62-210.900(1) - Form

Effective : 3-21-96

Application Contact

1. Name and Title of Application Contact : Name : Peter Truslow Title : President
2. Application Contact Mailing Address : Organization/Firm : Dougherty Marine Partnership Street Address : 201 North Flagler City : Edgewater State : FL Zip Code : 32132
3. Application Contact Telephone Numbers : Telephone : (904)426-5457 Fax : (904)427-9783

Application Comment

Additional project information is provided in April 6, 2000 Nelson Engineering Co. document titled "Title V Air Permit Application Dougherty Marine Partnership (aka Edgewater Powerboats) Summary of Attached Information (hard copy and pdf version provided as "DMPTV.pdf" provided with this application).

II. FACILITY INFORMATION

A. GENERAL FACILITY INFORMATION

Facility, Location, and Type

1. Facility UTM Coordinates :			
Zone : 17	East (km) :	North (km) :	
2. Facility Latitude/Longitude :			
Latitude (DD/MM/SS) : 28 59 17		Longitude (DD/MM/SS) : 80 55 24	
3. Governmental Facility Code :	4. Facility Status Code :	5. Facility Major Group SIC Code :	6. Facility SIC(s) :
0	C	37 +	3732
7. Facility Comment :			
Facility is an existing compound of 3 buildings currently used for boat building. Dougherty Marine P			
DEP Facility Comment			
+			

Facility Contact

1. Name and Title of Facility Contact :	
Peter Truslow President	
2. Facility Contact Mailing Address :	
Organization/Firm : Dougherty Marine Partnership	
Street Address : 201 North Flagler	
City : Edgewater	State : FL Zip Code : 32132
3. Facility Contact Telephone Numbers :	
Telephone : (904)426-5457	Fax : (904)427-9783

Property Boundary

UTM Coordinates :

Zone :	+	East :	km	+	North :	km	+
--------	---	--------	----	---	---------	----	---

Building Identification

Identification of Building on Plot Plan or Flow Diagram :

+

Building Height :

FT +

Building Boundary

UTM Coordinates :

Zone :	+	East :	km +	North :	km +
--------	---	--------	------	---------	------

Facility Contact

1. Name and Title of Facility Contact :

Name : Peter Truslow
Title : President

2. Facility Contact Mailing Address :

Organization/Fir Dougherty Marine Partnership
Street Address 201 North Flagler
City Edgewater
State : FL Zip Code : 32132

3. Facility Contact Telephone Numbers :

Telephone : (904)426-5457

Fax : (904)427-9783

II. Part 2 - 1

DEP Form No. 62-210.900(1) - Form

Effective : 3-21-96

Facility Regulatory Classifications

1. Small Business Stationary Source?	Y
2. Title V Source?	Y
3. Synthetic Non-Title V Source?	N
4. Major Source of Pollutants Other than Hazardous Air Pollutants (HAPs)?	N
5. Synthetic Minor Source of Pollutants Other than HAPs?	N
6. Major Source of Hazardous Air Pollutants (HAPs)?	Y
7. Synthetic Minor Source of HAPs?	N
8. One or More Emissions Units Subject to NSPS?	N
9. One or More Emission Units Subject to NESHAP?	N
10. Title V Source by EPA Designation?	Y
11. Facility Regulatory Classifications Comment :	
<p>Title V source for HAP emissions only from styrene associated with fiberglass reinforced plastics production of boats and boat parts.</p>	
Ozone SIP Facility :	+
Annual Operating Report Required :	+

II. Part 2 - I

B. FACILITY REGULATIONS

Rule Applicability Analysis

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B. FACILITY REGULATIONS

List of Applicable Regulations

62-213

62-210

62-4

62-103

62-296

62-204

62-212

II. Part 3b - 1

DEP Form No. 62-210.900(1) - Form
Effective : 3-21-96

C. FACILITY POLLUTANTS

Facility Pollutant Information

1. Pollutant Emitted	2. Pollutant Classification
H163	A

II. Part 4 - 1

D. FACILITY POLLUTANT DETAIL INFORMATION

Facility Pollutant Information

Pollutant 1

1. Pollutant Emitted	H163
:	
2. Requested Emissions Cap :	
	(lbs/hour) 48.0000 (tons/year)
3. Basis for Emissions Cap	OTHER
Code :	
4. Facility Pollutant Comment :	
Emissions cap requested based on maximum conceivable production rate. Facility is below RACT and PSD levels.	

II. Part 4b - 1

DEP Form No. 62-210.900(1) - Form

Effective : 3-21-96

E. FACILITY SUPPLEMENTAL INFORMATION

Supplemental Requirements for All Applications

1. Area Map Showing Facility Location :	DMPTV.pdf
2. Facility Plot Plan :	DMPTV.pdf
3. Process Flow Diagram(s) :	DMPTV.pdf
4. Precautions to Prevent Emissions of Unconfined Particulate Matter :	DMPTV.pdf
5. Fugitive Emissions Identification :	DMPTV.pdf
6. Supplemental Information for Construction Permit Application :	DMPTV.pdf

Additional Supplemental Requirements for Category I Applications Only

7. List of Proposed Exempt Activities :	DMPTV.pdf
8. List of Equipment/Activities Regulated under Title VI :	NA
9. Alternative Methods of Operation :	NA
10. Alternative Modes of Operation (Emissions Trading) :	NA
11. Identification of Additional Applicable Requirements :	NA
12. Compliance Assurance Monitoring Plan :	NA
13. Risk Management Plan Verification :	NA
14. Compliance Report and Plan :	NA
15. Compliance Certification (Hard-copy Required) :	NA

III. EMISSIONS UNIT INFORMATION

A. TYPE OF EMISSIONS UNIT (Regulated and Unregulated Emissions Units)

Emissions Unit Information Section 1

Styrene from fiberglass reinforced plastic boat building +

Type of Emissions Unit Addressed in This Section

1. Regulated or Unregulated Emissions Unit? Check one :

The emissions unit addressed in this Emissions Unit Information Section is a regulated emissions unit.

The emissions unit addressed in this Emissions Unit Information Section is an unregulated emissions unit.

2. Single Process, Group of Processes, or Fugitive Only? Check one :

This Emissions Unit Information Section addresses, as a single emissions unit, a single process or production unit, or activity, which produces one or more air pollutants and which has at least one definable emission point (stack or vent).

This Emissions Unit Information Section addresses, as a single emissions unit, a group of process or production units and activities which has at least one definable emission point (stack or vent) but may also produce fugitive emissions.

This Emissions Unit Information Section addresses, as a single emissions unit, one or more process or production units and activities which produce fugitive emissions only.

III. Part 1 - 1

Emissions Unit Information Section 1

**B. GENERAL EMISSIONS UNIT INFORMATION
(Regulated and Unregulated Emissions Units)**

Emissions Unit Description and Status

<p>1. Description of Emissions Unit Addressed in This Section : *</p> <p style="padding-left: 20px;">Styrene from fiberglass reinforced plastic boat building</p> <p>Description of Emissions Unit for AIRS Tracking : +</p> <p style="padding-left: 20px;">Styrene from fiberglass reinforced plastic boat building</p>		
<p>2. Emissions Unit Identification Number : *</p> <p style="padding-left: 40px;"><input checked="" type="checkbox"/> No Corresponding ID <input type="checkbox"/> Unknown</p>		
<p>3. Emissions Unit Status</p> <p style="padding-left: 40px;">Code : C *</p>	<p>4. Acid Rain Unit?</p> <p style="padding-left: 40px;"><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No *</p>	<p>5. Emissions Unit Major Group SIC Code : 37 +</p>
<p>6. Emissions Unit Comment :</p> <p style="padding-left: 20px;">Styrene from fiberglass reinforced plastic boat building</p> <p>DEP Emissions Unit Comment :</p> <p>Similar-Emissions Unit Identification Numbers for Fee Purposes :</p> <p style="padding-left: 40px;">+</p>		

Emissions Unit Information Section 1
Styrene from fiberglass reinforced plastic boat building

Emissions Unit Control Equipment 1

1. Description :		
No specific control equipment proposed. MACT analysis provided in DMPTV.pdf provides a listing of proposed approaches for this small business source to be consistent with		
2. Control Device or Method Code :	102	*

**C. EMISSIONS UNIT DETAIL INFORMATION
(Regulated Emissions Units Only)**

Emissions Unit Information Section 1

Styrene from fiberglass reinforced plastic boat building

Emissions Unit Details

1. Initial Startup Date :	15-Jun-2000	
2. Long-term Reserve Shutdown Date :		
3. Package Unit : Manufacturer :	Model Number :	
4. Generator Nameplate Rating :	MW	
5. Incinerator Information :		
Dwell Temperature :	Degrees Fahrenheit	
Dwell Time :	Seconds	
Incinerator Afterburner Temperature :	Degrees Fahrenheit	
Emissions Unit Type Code :	37 +	
Ozone SIP Base Emissions Unit :	+	

Emissions Unit Operating Capacity

1. Maximum Heat Input Rate :	mmBtu/hr	
2. Maximum Incinerator Rate :	lb/hr	tons/day
3. Maximum Process or Throughput Rate :		
4. Maximum Production Rate :		
5. Operating Capacity Comment :		

Emissions Unit Operating Schedule

Requested Maximum Operating Schedule :	
12 hours/day	6 days/week

III. Part 4 - 1

DEP Form No. 62-210.900(1) - Form

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52 weeks/year

3,800 hours/year

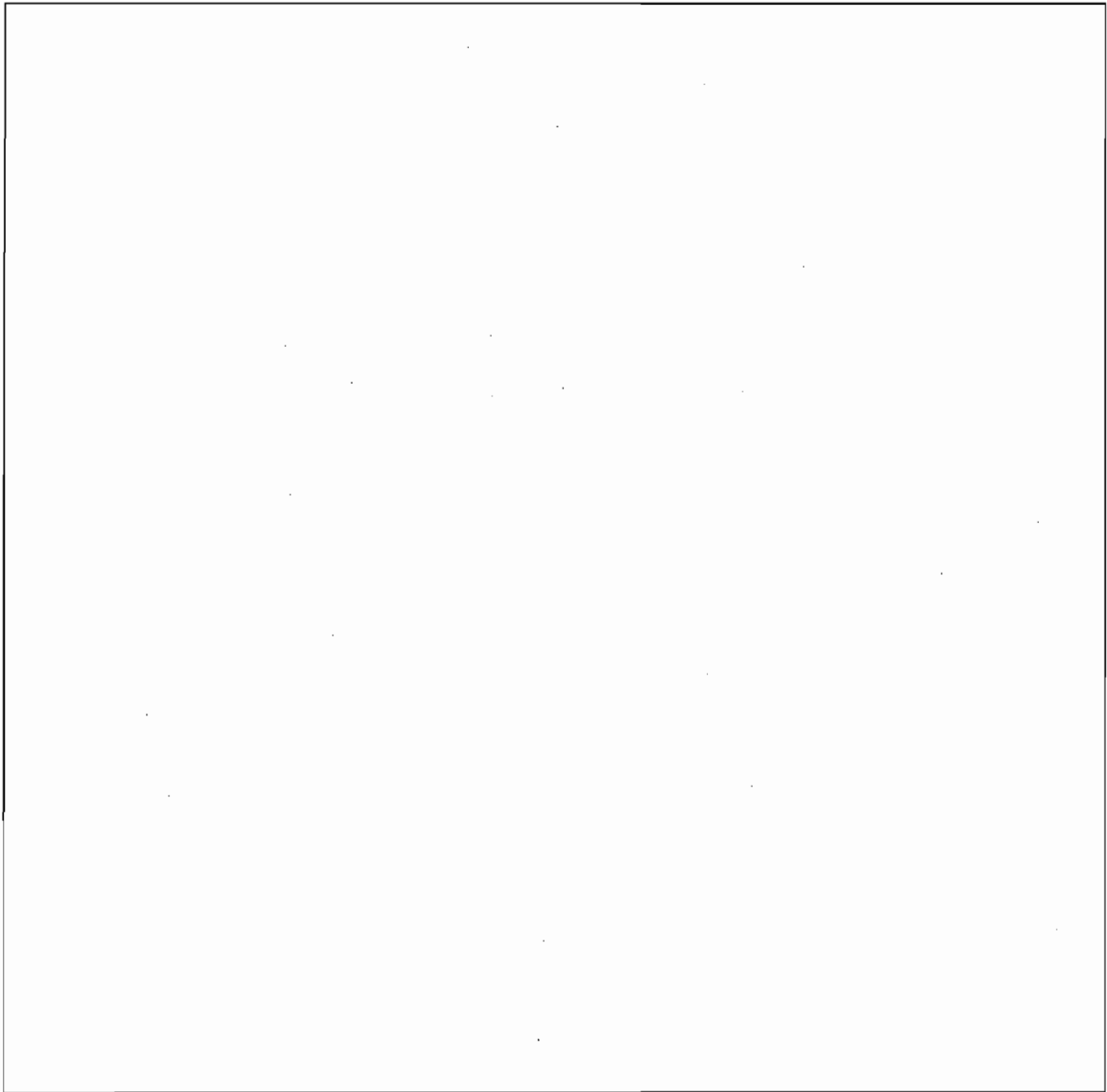
III. Part 4 - 2

DEP Form No. 62-210.900(1) - Form
Effective : 3-21-96

**D. EMISSIONS UNIT REGULATIONS
(Regulated Emissions Units Only)**

Emissions Unit Information Section 1
Styrene from fiberglass reinforced plastic boat building

Rule Applicability Analysis



III. Part 6a - 1

Emissions Unit Information Section 1
Styrene from fiberglass reinforced plastic boat building

List of Applicable Regulations

62-213

62-210

62-4

62-103

62-296

62-204

62-212

III. Part 6b - 1

DEP Form No. 62-210.900(1) - Form

Effective : 3-21-96

C. EMISSION POINT (STACK/VENT) INFORMATION

Emissions Unit Information Section 1

Styrene from fiberglass reinforced plastic boat building

Emission Point Description and Type :

1. Identification of Point on Plot Plan or Flow Diagram :	EU 001
2. Emission Point Type Code :	4 *
3. Descriptions of Emission Points Comprising this Emissions Unit :	
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common :	
All styrene fugitive emissions from operation	
5. Discharge Type Code :	F
6. Stack Height :	feet
7. Exit Diameter :	feet
8. Exit Temperature :	°F *
9. Actual Volumetric Flow Rate :	acfm
10. Percent Water Vapor :	%
11. Maximum Dry Standard Flow Rate :	dscfm
12. Nonstack Emission Point Height :	feet
13. Emission Point UTM Coordinates :	
Zone : 17 East (km) :	North (km) :
Good Engineering Practice Stack Height :	+
14. Emission Point Comment :	
As a fugitive emission, emission coordinates are same as facility latitude and longitude.	

III. Part 7a - 2

DEP Form No. 62-210.900(1) - Form

F. SEGMENT (PROCESS/FUEL) INFORMATION

Emissions Unit Information Section 1

Styrene from fiberglass reinforced plastic boat building

Segment Description and Rate : Segment 1

1. Segment Description (Process/Fuel Type and Associated Operating Method/Mode) :	
Combined use of resin and gelcoat that emit styrene vapors.	
2. Source Classification Code (SCC) : 30101899 *	
3. SCC Units : Tons Used	
4. Maximum Hourly Rate :	5. Maximum Annual Rate :
6. Estimated Annual Activity Factor :	
7. Maximum Percent Sulfur : Percent Sulfur Limit : +	8. Maximum Percent Ash :
9. Million Btu per SCC Unit :	
10. Segment Comment :	

III. Part 8 - 1

G. EMISSIONS UNIT POLLUTANTS
(Regulated and Unregulated Emissions Units)

Emissions Unit Information Section 1
Styrene from fiberglass reinforced plastic boat building

1. Pollutant Emitted	2. Primary Control Device Code	3. Secondary Control Device Code	4. Pollutant Regulatory Code
1 - H163 *	102 *		NS

Emissions Unit Information Section 1
 Styrene from fiberglass reinforced plastic boat building

Pollutant Information Section 1

Allowable Emissions 1

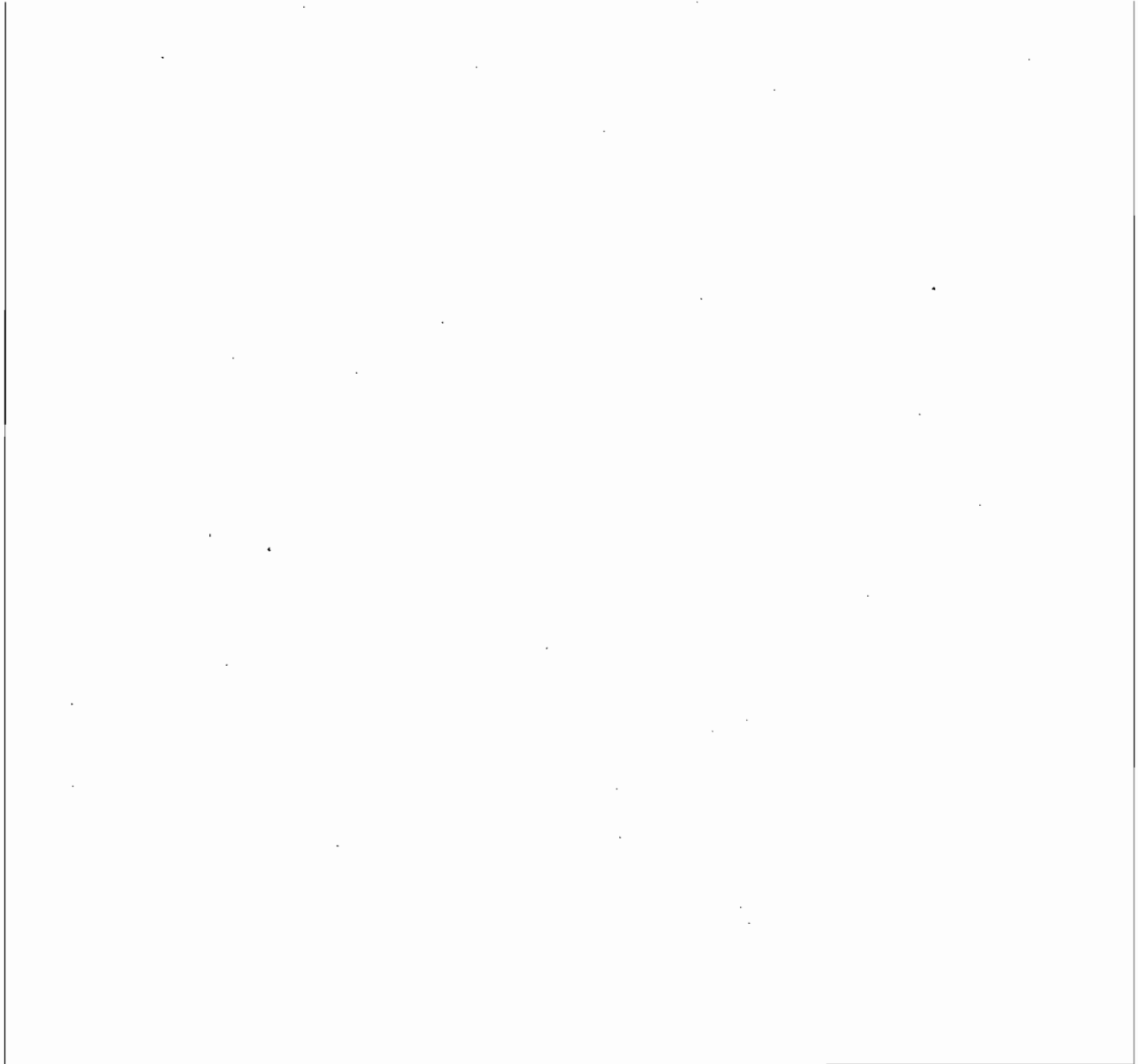
1. Basis for Allowable Emissions Code :	OTHER	*		
2. Future Effective Date of Allowable Emissions :	15-Jun-2000			
3. Requested Allowable Emissions and Units :	48.00	*	tons/yr	*
Allowable Emissions Unit :				
4. Equivalent Allowable Emissions :				
	0.00		lb/hour	48.00 tons/year
5. Method of Compliance :	Purchase records and annual operating report			
Compliance Method Code :	+*	Compliance Test Frequency :		+*
Frequency Base Date :	06/15/2000	+		
Regulation :				+*
6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) :				

Emissions Unit Information Section _____

Pollutant Information Section _____

Allowable Emissions Information Section _____

Test Methods



III. Part 11 - 1

Effective : 3-21-96

**I. VISIBLE EMISSIONS INFORMATION
(Regulated Emissions Units Only)**

Emissions Unit Information Section 1
 Styrene from fiberglass reinforced plastic boat building

Visible Emissions Limitation : Visible Emissions Limitation 1

1. Visible Emissions Subtype :	*
2. Basis for Allowable Opacity :	*
3. Requested Allowable Opacity :	
Normal Conditions :	%
Exceptional Conditions :	%
Maximum Period of Excess Opacity Allowed :	min/hour
4. Method of Compliance :	
5. Visible Emissions Comment :	
Styrene vapors are colorless and the emissions are considered fugitive. VE standards do not apply. There is no defined stack exhaust point	
Compliance Test Frequency :	0 + Frequency Base Date : +
COM Required :	+
Regulation :	+*

**J. CONTINUOUS MONITOR INFORMATION
(Regulated Emissions Units Only)**

Emissions Unit Information Section 1

Styrene from fiberglass reinforced plastic boat building

Continuous Monitoring System Continuous Monitor 1

1. Parameter Code :	*	2. Pollutant(s):	
3. CMS Requirement		CMS Requirement Code :	+
4. Monitor Information Manufacturer : Model Number Serial Number			
5. Installation Date :			
6. Performance Specification Test Date :			
7. Continuous Monitor Comment : Not applicable			
Performance Specification Test Status :			+
Certification Date (DD-MON-YYYY) :			+

K. PREVENTION OF SIGNIFICANT DETERIORATION (PSD) INCREMENT TRACKING INFORMATION

Emissions Unit Information Section 1

Styrene from fiberglass reinforced plastic boat building

PSD Increment Consumption Determination

1. Increment Consuming for Particulate Matter or Sulfur Dioxide?

-] The emissions unit is undergoing PSD review as part of this application, or has undergone PSD review previously, for particulate matter or sulfur dioxide. If so, emissions unit consumes increment.
-] The facility addressed in this application is classified as an EPA major source pursuant to paragraph (c) of the definition of "major source of air pollution" in Chapter 62-213, F.A.C., and the emissions unit addressed in this section commenced (or will commence) construction after January 6, 1975. If so, baseline emissions are zero, and emissions unit consumes increment.
-] The facility addressed in this application is classified as an EPA major source, and the emissions unit began initial operation after January 6, 1975, but before December 27, 1977. If so, baseline emissions are zero, and emissions unit consumes increment.
-] For any facility, the emissions unit began (or will begin) initial operation after December 27, 1977. If so, baseline emissions are zero, and emissions unit consumes increment.
-] None of the above apply. If so, the baseline emissions of the emissions unit are nonzero. In such case, additional analysis, beyond the scope of this application, is needed to determine whether changes in emissions have occurred (or will occur) after the baseline date that may consume or expand increment.

III. Part 12 - 1

2. Increment Consuming for Nitrogen Dioxide?

-] The emissions unit addressed in this section is undergoing PSD review as part of this application, or has undergone PSD review previously, for nitrogen dioxide. If so, emissions unit consumes increment.
-] The facility addressed in this application is classified as an EPA major source pursuant to paragraph (c) of the definition of "major source of air pollution" in Chapter 62-213, F.A.C., and the emissions unit addressed in this section commenced (or will commence) construction after February 8, 1988. If so, baseline emissions are zero, and emissions unit consumes increment.
-] The facility addressed in this application is classified as an EPA major source, and the emissions unit began initial operation after February 8, 1988, but before March 28, 1988. If so, baseline emissions are zero, and emissions unit consumes increment.
-] For any facility, the emissions unit began (or will begin) initial operation after March 28, 1988. If so, baseline emissions are zero, and emissions unit consumes increment.
-] None of the above apply. If so, baseline emissions of the emissions unit are nonzero. In such case, additional analysis, beyond the scope of this application, is needed to determine whether changes in emissions have occurred (or will occur) after the baseline date that may consume or expand increment.

3. Increment Consuming/Expanding Code :			
PM :	SO2 :	NO2 :	
4. Baseline Emissions :			
PM :	lb/hour	tons/year	
SO2 :	lb/hour	tons/year	
NO2 :		tons/year	
5. PSD Comment :			
NA			

III. Part 12 - 2

DEP Form No. 62-210.900(1) - Form

Effective : 3-21-96

L. EMISSIONS UNIT SUPPLEMENTAL INFORMATION

Emissions Unit Information Section

1

Styrene from fiberglass reinforced plastic boat building

Supplemental Requirements for All Applications

1. Process Flow Diagram :	DMPTV.pdf
2. Fuel Analysis or Specification :	
3. Detailed Description of Control Equipment :	DMPTV.pdf
4. Description of Stack Sampling Facilities :	NA
5. Compliance Test Report :	NA
6. Procedures for Startup and Shutdown :	NA
7. Operation and Maintenance Plan :	DMPTV.pdf
8. Supplemental Information for Construction Permit Application :	DMPTV.pdf
9. Other Information Required by Rule or Statue :	DMPTV.pdf

Additional Supplemental Requirements for Category I Applications Only

10. Alternative Methods of Operations :	NA
11. Alternative Modes of Operation (Emissions Trading) :	NA

III. Part 13 - 1

DEP Form No. 62-210.900(1) - Form

Effective : 3-21-96

12. Identification of Additional Applicable Requirements :	NA
13. Compliance Assurance Monitoring Plan :	NA
14. Acid Rain Application (Hard-copy Required) :	
NA	Acid Rain Part - Phase II (Form No. 62-210.900(1)(a))
NA	Repowering Extension Plan (Form No. 62-210.900(1)(a)1.)
NA	New Unit Exemption (Form No. 62-210.900(1)(a)2.)
NA	Retired Unit Exemption (Form No. 62-210.900(1)(a)3.)

III. Part 13 - 2

DEP Form No. 62-210.900(1) - Form

Effective : 3-21-96

**Title V Air Permit Application
Dougherty Marine Partnership (aka Edgewater Powerboats)
Summary of Attached Information**

General Information: Dougherty Marine Partnership (aka Edgewater Powerboats) operates a boat building facility at 201 North Flagler in Edgewater, FL 32132 under a current Title V permit - permit number 1270104-003-AV. The partnership intends to relocate its manufacturing operation to a different facility located at 211 Dale Street in Edgewater, FL. This different facility is an existing set of three buildings that have been used for industrial operations in the past and are currently used in the boat building industry - including for fiberglass reinforced plastics manufacturing. This new facility, although it currently exists, is referred to as "new" in this application in order to distinguish it from the existing permitted facility at 201 North Flagler. The intended manufacturing process uses fiberglass reinforced plastics (FRP) and includes using uncured resins, a setting catalyst, and fiberglass material to produce a hardened plastic product that comprises the boat and/or boat parts. Styrene is emitted in the manufacturing process from the use of resin and gel coat. It is expected that styrene emissions from this facility will exceed the Title V threshold of 10 tons per year (as has their existing permitted operation).

Appendix 1 Figures and Photos

- Figure 1: Location Map
- Figure 2: Plot (Site) Plan
- Figure 3: Process Flow Diagram
- Photos 1 and 2: Photos of Proposed "new" facility

Appendix 2 Fugitive Emissions

- A. Precautions to Prevent Unconfined Particulate Emissions
- B. Fugitive Emissions Identification

Appendix 3 Supplemental Information for Construction Permit

- A. Description of Operation
- B. Description of Project
- C. Description of Facility Exhaust
- D. Calculations Spreadsheet

Appendix 4 List of Proposed Exempt Activities

Appendix 5 Paper Copy of DEP Form 62-210.900(1) Printed from ELSA

Appendix 6 MACT Analysis for Permit Application

Notes to Project:

1. Dougherty Marine Partnership (aka Edgewater Powerboats) of Edgewater, Florida, is not affiliated with R.J. Dougherty and Associates (RJDA) who has a pending permit application for a different facility on Air Park Road in Edgewater, FL

2. The intended operations facility is an existing facility. The existing permitted operation at 201 North Flagler intends to relocate to this "new" facility. No modifications are planned to the "new" facility. The "new" facility has six (6) large sliding doors (30' in width, full height to the structure eave) on the building intended for use in the gelcoat and layup processes. These doors are currently used, and will be used, for ventilation purposes.

**Appendix 6
Title V Permit Application
Edgewater Powerboats**

**MACT Determination Requested by Applicant
Case-by-Case MACT Determination**

Dougherty Marine Partnership (aka Edgewater Powerboats) operates a boat building facility at 201 North Flagler in Edgewater, FL 32132 under a current Title V permit - permit number 1270104-003-AV. The partnership intends to relocate its manufacturing operation to a different facility located at 211 Dale Street in Edgewater, FL. This different facility is an existing set of three buildings that have been used for industrial operations in the past and are currently used in the boat building industry - including for fiberglass reinforced plastics manufacturing. This new facility, although it currently exists, is referred to as "new" in this MACT analysis in order to distinguish it from the existing permitted facility at 201 North Flagler. The intended manufacturing process uses fiberglass reinforced plastics (FRP) and includes using uncured resins, a setting catalyst, and fiberglass material to produce a hardened plastic product that comprises the boat and/or boat parts. Styrene is emitted in the manufacturing process from the use of resin and gel coat. It is expected that styrene emissions from this facility will exceed the Title V threshold of 10 tons per year (as has their existing permitted operation).

Edgewater Powerboats is a small business that manufactures open fishing boats from 14 feet to 26 feet in length. The current facility emitted a total of slightly less than 15 tons of styrene for calendar year 1999 (based on their recently submitted annual operating report) [Note: this emissions amount was based on the old emissions calculations method that was used during the permitting of the existing operation. The same raw material usage equates to an annual emissions amount of 22.02 tons using the calculations method specified in DARM-PER/GEN-37]. Similar, but slightly higher, production rates are expected for the upcoming years. However, there is the potential for expanded business growth. As such, Edgewater Powerboats would like to permit the new facility to be able to emit up to 48 tons per year of styrene to account for business growth during the term of the permit.

The "new" facility is located in an industrial area of Edgewater. Properties on the north, east and south are undeveloped properties. Dale St. is due west of the facility. Currently the property west of Dale St. adjacent to the facility is being developed for additional boat building industry companies.

1. Applicant Specified Control Technology:

- A. Use of resins that contain a maximum average of 35% styrene, based on Manufacturer's Safety Data Sheets (MSDS), with compliance determined on a 3-month rolling average.
- B. Use of base gel coats and pigmented gel coats that contain a maximum average of 35% styrene, based on Manufacturer's Safety Data Sheets (MSDS), with compliance determined on a 3-month rolling average.

- C. Use of clear gel coats that contain a maximum average of 48% styrene, based on Manufacturer's Safety Data Sheets (MSDS), with compliance determined on a 3-month rolling average.
- D. Use of non-atomizing resin applicators (Magnum Industries' Fluid Impingement Technology (FIT)). Data on FIT emissions comparison with flowcoat and standard chop gun application is provided in Attachment 1.
- E. Use of resin and gel coat cleaning solvents that do not contain HAPs or VOCs.

2. Required Information

- (i) Applicant: Dougherty Marine Partnership (aka Edgewater Powerboats)

Current Address:

201 North Flagler
Edgewater, FL 32132

Proposed Address:

211 Dale St.
Edgewater, FL 32132

- (ii) Dougherty Marine Partnership is proposing to relocate its current Title V air permitted boat building operation in Edgewater, FL to a different existing facility to manufacture boats and boat parts. The "new" facility is an existing facility that is currently used by a different company for boat building and repair.

Styrene is emitted in the manufacturing process from the use of resin and gel coat. It is expected that styrene emissions from this facility will exceed the MACT threshold of 10 tons per year.

- (iii) Expected Relocation Start Date: 6/1/00
- (iv) Expected Relocation Completion Date: 6/15/00
- (v) Anticipated Start-up Date: 6/15/00
- (vi) HAP Emitted: Styrene
Estimated Emission Rate: 30-35 tons/year
- (vii) Federally Enforceable Emissions Limitations: None
- (viii) Maximum Capacity: 1,110,000 lbs/year resin used, 205,000 lbs/year gel coat used
Expected Capacity: Assume same as maximum.
- (ix) Emissions, Maximum Capacity: 48.3 tons/year
Emissions, Expected Capacity: Assume same as maximum.
- (x) Recommended Emission Limitation: 48.3 tons/year styrene
- (xi) Selected Control Technology - See #1 above.
 - (A) Description of ventilation system in lamination building:

The historical objectives of ventilation systems for the FRP boat building industry have been to reduce the amount of fumes and vapors on the manufacturing floor in order to meet the OSHA permissible exposure limit of 50 ppm for the facilities' employees. The intent of the ventilation systems has typically not been to control, reduce or manage the hazardous air pollutants. The "new" facility intended for operations by Dougherty Marine Partnership was constructed years ago consistent with historical practices. The facility was constructed with six (6) large sliding doors on three sides of the building (Building 3) and three (3) large sliding doors on three (3) sides (Building 1) which are typically are open during the layup process. Air flows through these doors and provides adequate ventilation. The facility does not have an installed mechanical ventilation system (ducts, exhaust fans, stacks, etc.). The styrene vapors are typically exhausted through these open doors due to natural air flow.

It is proposed to use the facility as is and to not modify the facility to install mechanical ventilation equipment. No add-on control equipment is proposed. Add-on control options have been reviewed, but based on the existing state of technology application in the boat building industry, add-on controls are not believed to be economically or technically feasible. As a Small Business, Dougherty Marine Partnership does not have the in-house technical expertise or financial or other resources to test add-on control equipment in a pilot program setting.

This MACT recommendation is made based on:

- a detailed review of other boat building operations
- a detailed review of other MACT determinations (summarized by FDEP in the pending Sea Ray permit application)
- the location of the site in an industrial area of Edgewater with no immediate property neighbors
- the low probability of objectionable odor complaints from neighbors since the proposed "new" site is already being used in the boat building industry and emitting styrene vapors
- the relatively small size of the operation and emissions compared to other large proposed businesses including Sea Ray's new proposed Merritt Island facility which would emit 211 tons/yr
- the cost to retroactively install a mechanical ventilation system in order to install any type of add-on control equipment would be significant and cost prohibitive.

(B) Other Information:

- Dougherty Marine Partnership does not use marine coatings, interior wood parts, carpets or fabrics in its production of boats and boat parts.

- Making and repairing molds is a minor effort. Separate requirements for these activities, including record keeping, would be burdensome for Dougherty Marine Partnership.
- *The current emissions calculations method approved by FDEP in their guidance memo DARM-PER/GEN-37 is no longer consistent with the use of the MACT controls specified.* The FDEP emissions factors were based on old chop guns instead of low emission flocoaters or the even newer FIT technology which is generally showing a 20% reduction in emissions compared to flocoat technology. It is requested that the FDEP review its approved calculations method and update the approach based on new MACT resin application methods to more accurately reflect current industry practices.

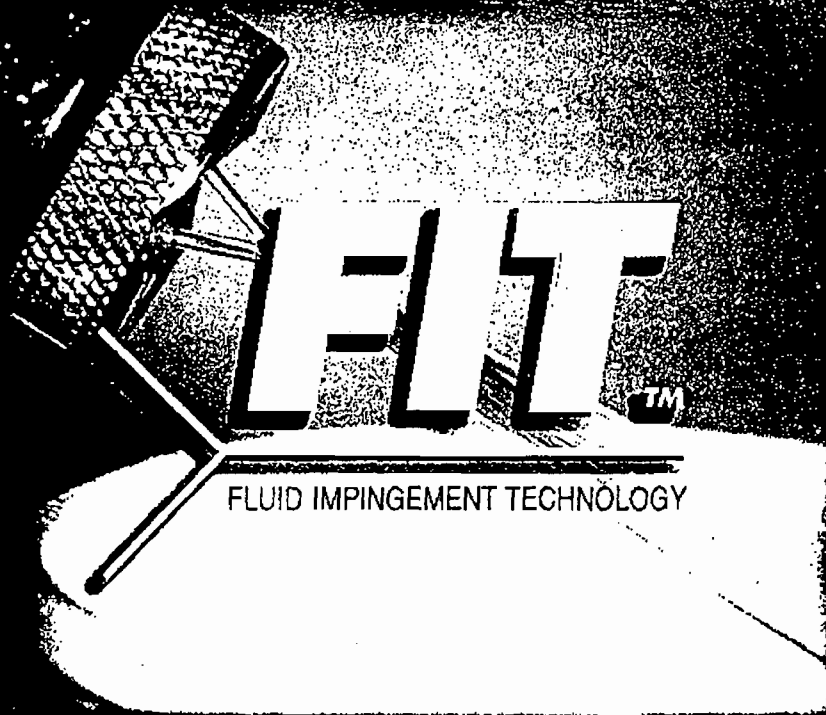
(C) Supporting Documentation

References:

- a. Determinations of Best Available Control Technology (BACT) and Maximum Achievable Control Technology (MACT), Sea Ray Boats, Inc., DEP File No. 0090093-003-AC.
- b. Reinforced Plastics and Boat Manufacturing MACT Standards Development, A Status Review, June 12, 1998.
- c. Assessment of Styrene Emission Controls for FRP/C and Boat Building Industries FINAL REPORT and Addendum, Emery J. Kong, Mark A. Bahner, and Sonji L. Turner, Research Triangle Institute, Research Triangle Park.

Attachment 1
Fluid Impingement Technology
Applicator Information

EMISSION COMPARISON REPORT




on

FIT CHOP™ and FIT GEL™

During application of RESIN and GELCOAT

by

 **MAGNUM**
INDUSTRIES

REPORT CONCLUSION

The FIT systems showed a large reduction of styrene emissions, during application, when compared to airless/air assist for both resin and gelcoat.

- Average Reduction for Resin: 72%*
- Average Reduction for Gelcoat: 52%*

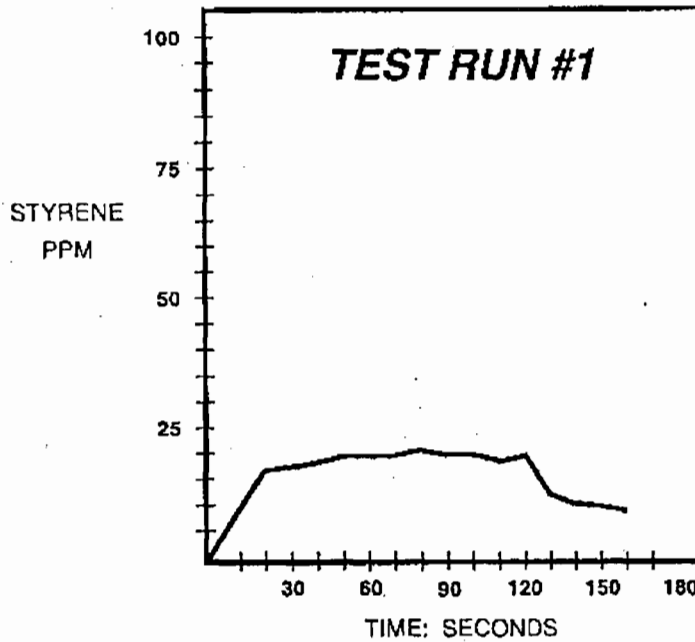
2. The FITCHOP system appears to have performed slightly better than the flocoat chopper from an emission standpoint. It was also evident the pattern was more uniform and the large orifice on the FITCHOP system should eliminate plugging issues with filled resins or contamination.

3. There was a noticeable reduction of entrapped air in the resin when applied with the FITCHOP system due to the low pressure and lack of shearing that took place during application. This could be even more beneficial for gelcoat applications in the goal to reduce porosity.

**Disclaimer: The tests were performed in a controlled environment and actual field results may be better or worse depending on conditions*

FIT™

FIT CHOP™



Average
Styrene
Concentration
16 ppm

DATA POINT CHART

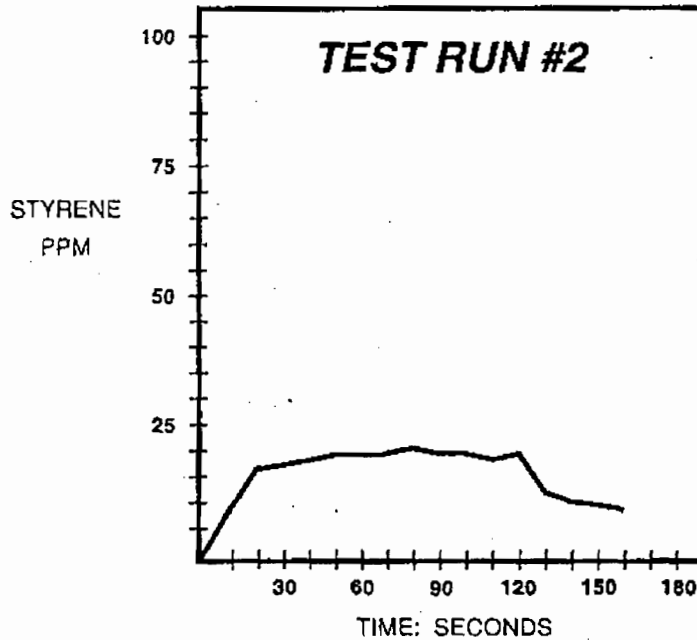
TIME IN SECONDS	0	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160
STYRENE IN PPM	0	09	14	17	18	19	19	19	20	19	19	18	19	13	11	10	9

TEST RUN #1 FIT CHOP

RESIN TYPE:	DCPD 38% styrene
CATALYST LEVEL:	2%
RESIN TIP PRESSURE:	24 psi
TARGET DISTANCE:	24 inches
TARGET SIZE:	32 sq. ft.
BOOTH SIZE:	10 ft. x 12 ft.
AIR FLOW IN BOOTH:	100 fpm. at 12,000 cfm
DURATION OF APPLICATION:	2 minute
SAMPLE INTERVALS:	10 seconds
OUTPUT:	.75 gpm
TOTAL OUTPUT:	1.5 gallons
GLASS CONTENT:	30%
TIP SIZE:	7025

1-17-77

FLOCOAT CHOP



Average Styrene Concentration
20 ppm

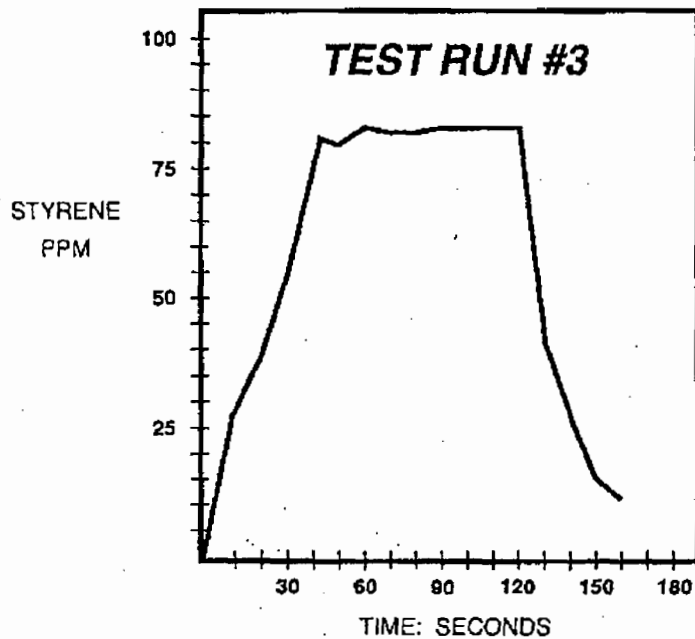
DATA POINT CHART

TIME IN SECONDS	0	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160
STYRENE IN PPM	0	13	18	23	24	25	25	26	25	24	25	25	26	15	11	10	9

TEST RUN #2 FLOCOAT CHOP

RESIN TYPE:	DCPD 38% styrene
CATALYST LEVEL:	2%
RESIN TIP PRESSURE:	400 psi
TARGET DISTANCE:	24 inches
TARGET SIZE:	32 sq. ft.
BOOTH SIZE:	10 ft. x 12 ft.
AIR FLOW IN BOOTH:	100 fpm. at 12,000 cfm
DURATION OF APPLICATION:	2 minute
SAMPLE INTERVALS:	10 seconds
OUTPUT:	.75 gpm
TOTAL OUTPUT:	1.5 gallons
GLASS CONTENT:	30%
TIP SIZE:	.015 w / 27 holes

AIRLESS AIR ASSIST CHOP



Average Styrene Concentration
60 ppm

DATA POINT CHART

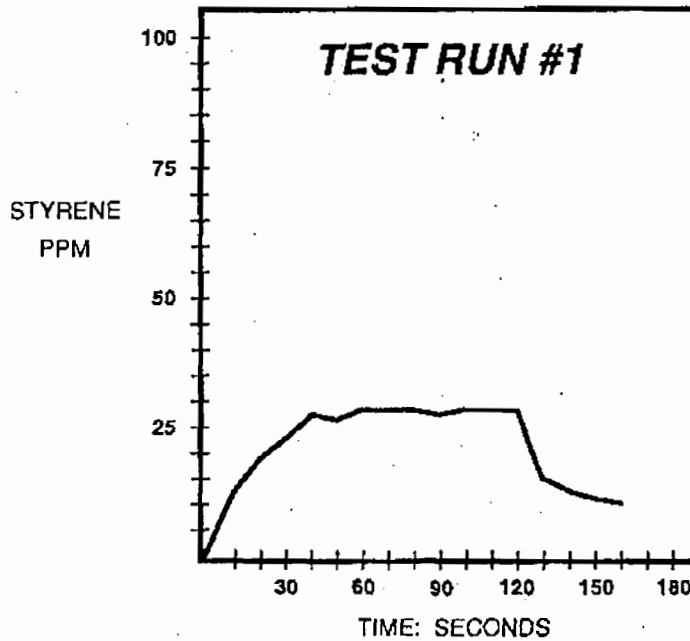
TIME IN SECONDS	0	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160
STYRENE IN PPM	0	23	39	56	81	80	83	82	82	83	83	83	83	41	26	15	12

TEST RUN #3 AIRLESS AIR ASSIST CHOP

RESIN TYPE:	DCPD 38% styrene
CATALYST LEVEL:	2%
RESIN TIP PRESSURE:	400 psi
TARGET DISTANCE:	24 inches
TARGET SIZE:	32 sq. ft.
BOOTH SIZE:	10 ft. x 12 ft.
AIR FLOW IN BOOTH:	100 lpm. at 12,000 cfm
DURATION OF APPLICATION:	2 minute
SAMPLE INTERVALS:	10 seconds
OUTPUT:	.75 gpm
TOTAL OUTPUT:	1.5 gallons
GLASS CONTENT:	30%
TIP SIZE:	543

1-17-77

FIT GEL™



Average Styrene Concentration
22 ppm

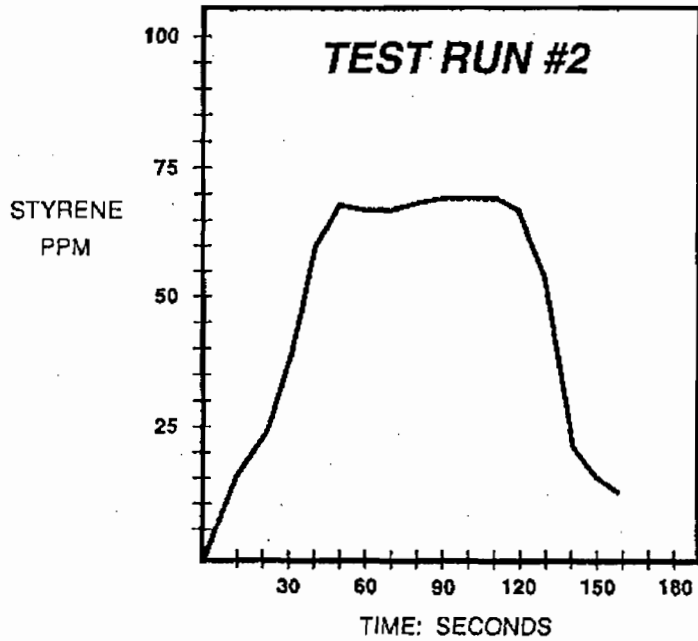
DATA POINT CHART

TIME IN SECONDS	0	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160
STYRENE IN PPM	0	13	19	23	27	26	28	28	28	27	28	28	28	15	13	11	10

TEST RUN #1 FIT GEL

GEL COAT TYPE:	Ortho 33% styrene
CATALYST LEVEL:	2%
RESIN TIP PRESSURE:	160 psi
TARGET DISTANCE:	24 inches
TARGET SIZE:	32 sq. ft.
BOOTH SIZE:	10 ft. x 12 ft.
AIR FLOW IN BOOTH:	100 fpm. at 12,000 cfm
DURATION OF APPLICATION:	2 minute
SAMPLE INTERVALS:	10 seconds
OUTPUT:	.20 gpm
TOTAL OUTPUT:	.4 gallons
TIP SIZE:	2525

AIRLESS AIR ASSIST GEL



Average Styrene Concentration
49ppm

DATA POINT CHART

TIME IN SECONDS	0	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160
STYRENE IN PPM	0	15	23	38	59	68	67	67	68	69	69	69	67	54	21	15	13

TEST RUN #2 AIRLESS AIR ASSIST GEL

GEL COAT TYPE:	Ortho 33% styrene
CATALYST LEVEL:	2%
RESIN TIP PRESSURE:	550 psi
TARGET DISTANCE:	24 inches
TARGET SIZE:	32 sq. ft.
BOOTH SIZE:	10 ft. x 12 ft.
AIR FLOW IN BOOTH:	100 fpm. at 12,000 cfm
DURATION OF APPLICATION:	2 minute
SAMPLE INTERVALS:	10 seconds
OUTPUT:	.20 gpm
TOTAL OUTPUT:	.4 gallons
TIP SIZE:	521

SAMPLE EQUIPMENT

EMS - 250

The EMS - 250 is an electrocatalytic styrene sample system that was set up to analyze air samples from the exhaust stack. The unit is equipped with a data logger that was set up to register a reading every ten seconds for a duration of 160 seconds, 40 seconds longer than the spray period. The samples were drawn from the stack at a point far enough downstream from the exhaust fan to assure a homogeneous mix of the air and styrene.

Verification of Sampling Methods and Results

1. Preliminary test results at the EPA have shown the EMS - 250 to be highly accurate when compared to a total hydrocarbon analyzer utilizing a flame ionization detector.
2. A certified calibration gas source of styrene (51.2 ppm) was fed into the EMS sampling port before and after each test. The resulting reading was 52 ppm each time the calibration gas was applied, showing a variation of less than 5%.
3. During sampling Gastec colorimetric tubes were used to extract air samples from the same position in the exhaust stack as the EMS - 250. The results from the tubes were then compared and found to be within 5% of the EMS - 250.



Department of Environmental Protection

Jeb Bush
Governor

Central District
3319 Maguire Boulevard, Suite 232
Orlando, Florida 32803-3767

David B. Struhs
Secretary

AIR RESOURCES COMPLETENESS REVIEW

SOURCE NAME: Fiberglass Boat Builder
APPLICANT: Peter Truslow, President
ADDRESS: Dougherty Marine Partnership
201 North Flagler
Edgewater, Florida 32132
DATE RECEIVED: 04/19/00
DATE REVIEWED: 05/02/00
FILE: 1270166-001-AC

Your application for this project has been received and reviewed for completeness. The following items are needed to complete your application.

1. The project is subject to section 112(g) of the Clean Air Act, because of the projected emissions of styrene above 10 tons per year. The MACT proposal was sent to DARM in Tallahassee for analysis. Provide this office with an acceptable MACT analysis according to Tallahassee review.
2. The facility is subject to other permits from the DEP. Provide a statement that the other applications (such as Wetlands, Hazardous Waste, Domestic Waste, and Drinking Water) have been, or intend to be, sent to this office.
3. The company will need to track material usage and VOC emissions when it receives the permit. Provide a copy of a worksheet, which will be used to track twelve-month usage of resins and the VOC emissions.
4. The company requested a work limit of 3800 hours per year, when no limit is required. Provide a statement that a production limitation of 3800 hours per year is needed.

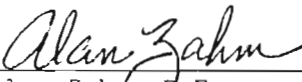
Pursuant to Rule 62-4.055, the applicant shall have ninety days after the Department mails a timely request for additional information to submit that information to the Department. If an applicant requires more than ninety days in which to respond to a request for additional information, the applicant may notify the Department in writing of the circumstances, at which time the application shall be held in active status for one additional period of up to ninety days. Additional extensions shall be granted for good cause shown by the applicant. A showing that the applicant is making a diligent effort to obtain the requested additional information shall constitute good cause. Failure of an applicant to provide the timely requested information by the applicable deadline shall result in denial of the application.

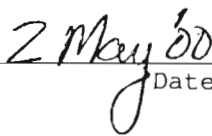
"Protect, Conserve and Manage Florida's Environment and Natural Resources"

Page two
Dougherty Marine Partnership
File 1270166-001-AC

If you have any questions, please fax me at 407.897.5963 or write to me at the above address.

Sincerely,



Alan Zahn, P.E.
Permitting Supervisor


Date

AZ/az

cc:Blaine Nelson, PE

Cindy Phillips, DARM