CANTELOU ASSOCIATES
CONSULTING ENGINEERS
SURVEYORS & PLANNERS

April 28, 1989

John Reynolds
DER
2600 Blairstone Road
Tallahassee, FL 32399

RE: Sykes Creek
Construction Permit No. AC 05-151435

Dear Mr. Reynolds:

After obtaining additional information from manufacturers, we are planning with your permission to use the following numbers in emission calculations for Sykes Creek:

Styrene emissions (resin) = Wt. of resin x
% by wt. of styrene x
6% volatilized

Styrene emissions (gelcoat) = Wt. of gelcoat x
% by wt. of styrene x
30% volatilized

Methyl Methacralate (gelcoat) = Wt. of gelcoat x
% by wt. of styrene x
100% volatilized

If you have any questions, please feel free to call.

Yours truly,

G. E. Cantelou, Jr. P. E.

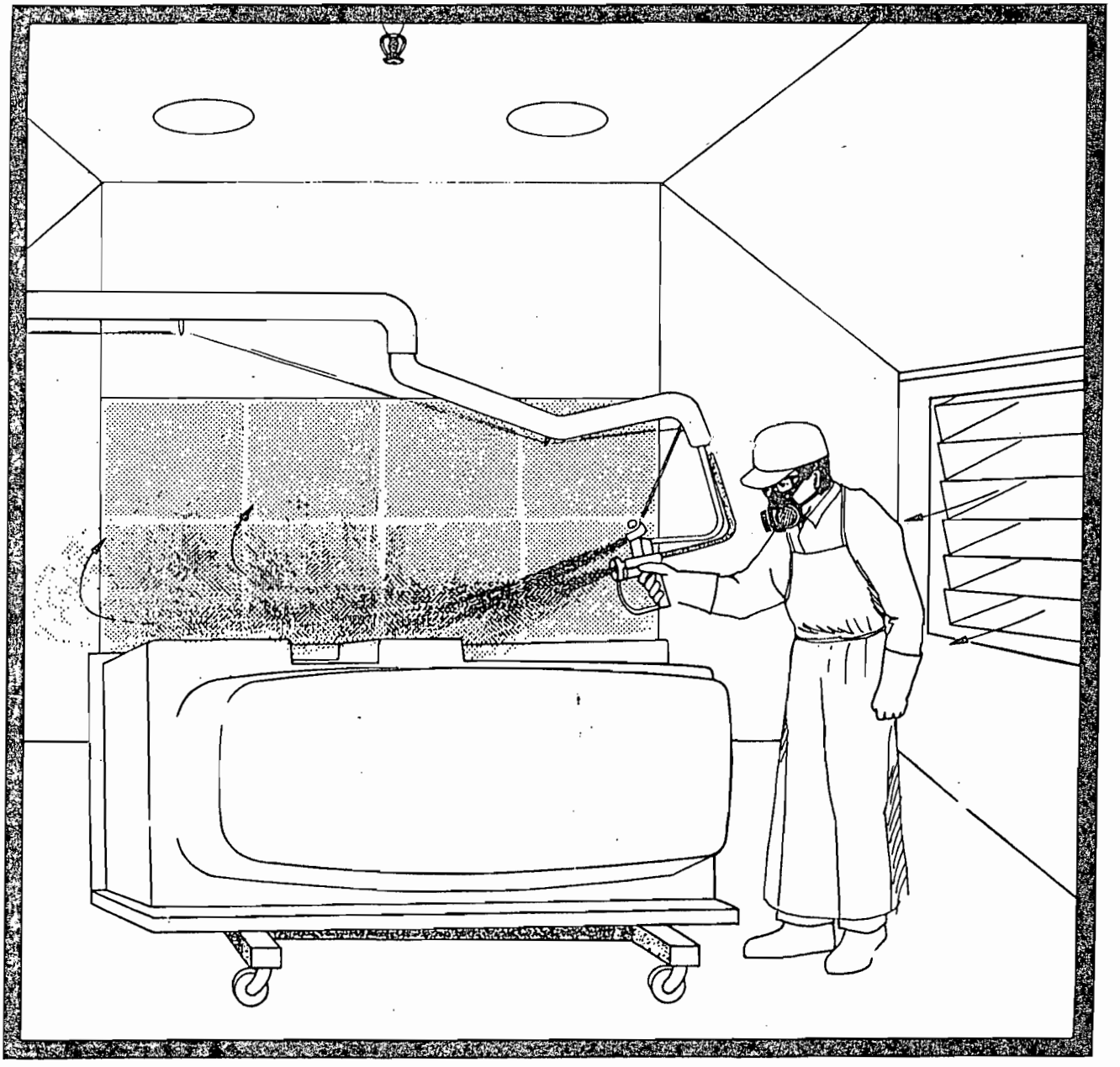
GEC:sc

Enclosures

1359 Silver Bluff Rd. Suite B-3 / P.O. Box 3102 / Aiken, S.C. 29802 / (803) 648-9300

Occupational Exposures to Styrene
and Other Health Hazards in the Fiberglass Reinforced Plastics Industry

A Special Studies Report by CAL OSHA



Department of Industrial Relations

State of California
George Deukmejian, Governor
Ron Rinaldi, Director of Industrial Relations

worker performed almost continuous spraying while standing on a portable platform that was inserted into the tank that also supported a large duct with high velocity airflow that exhausted vapors very close to the point of generation.

Two facilities, using a unique production process to ensure good secondary bonding between resin layers, also had the side effect of obtaining low ambient exposure levels from the process. After gelcoating and hand laminating the mold, the part was covered with plastic sheeting and a vacuum pulled while the part is curing. Covering the part and pulling a vacuum through the space between the part and the plastic, removes styrene vapor from the work place air and reduces employee exposure.

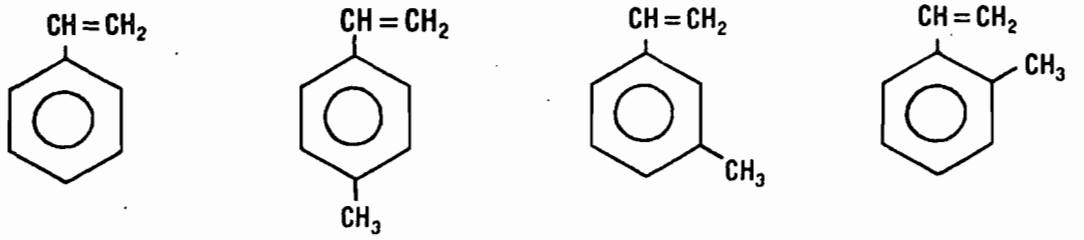
The majority of companies which installed some form of dilution ventilation, for example, filter banks on the walls that pull a large volume of air, were mostly ineffective. They were either too far from the source of the exposure or were defeated by lack of directionality and turbulence.

Substitution

NIOSH estimates that approximately 6% of styrene monomer in a 40/60 polyester resin mixture vaporizes during the curing process. Methyl styrene (also called vinyl toluene) is a close chemical cousin of styrene that has a lower vapor pressure, reducing the amount of vaporization. Methyl styrene has three isomers, para, meta, or the ortho form. Two production facilities were using a resin mixture containing 60% polyester, 14% styrene and 26% para-methyl styrene.

FIGURE V.3

Styrene and the Three Isomers of Methyl Styrene



STYRENE | Para methyl styrene | Meta methyl styrene | Ortho methyl styrene

TABLE 4.12-2. EMISSION FACTORS FOR UNCONTROLLED POLYESTER RESIN PRODUCT FABRICATION PROCESSES[a]
(100 x mass of VOC emitted/mass of monomer input)

Process	Resin		Emission Factor Rating	Gel Coat		Emission Factor Rating
	NVS	VS[b]		NVS	VS[b]	
Hand layup	5 - 10	2 - 7	C	26 - 35	8 - 25	D
Spray layup	9 - 13	3 - 9	B	26 - 35	8 - 25	B
Continuous lamination	4 - 7	1 - 5	B	midrange = 30%	[c]	
Pultrusion[d]	4 - 7	1 - 5	D	c	c	--
Filament winding[e]	5 - 10	2 - 7	D	c	c	--
Marble casting	1 - 3	1 - 2	B	f	f	--
Closed molding[g]	1 - 3	1 - 2	D	c	c	--

[a]Reference 9. Ranges represent the variability of processes and sensitivity of emissions to process parameters. Single value factors should be selected with caution. NVS = nonvapor-suppressed resin. VS = vapor-suppressed resin.
[b]Factors are 30-70% of those for nonvapor-suppressed resins.
[c]Gel coat is not normally used in this process.
[d]Resin factors for the continuous lamination process are assumed to apply.
[e]Resin factors for the hand layup process are assumed to apply.
[f]Factors unavailable. However, when cast parts are subsequently sprayed with gel coat, hand and spray layup gel coat factors are assumed to apply.
[g]Resin factors for marble casting, a semiclosed process, are assumed to apply.

TABLE 4.12-3. TYPICAL RESIN STYRENE PERCENTAGES

Resin Application	Resin Styrene Content[a] (wgt. %)
Hand layup	43
Spray layup	43
Continuous lamination	40
Filament winding	40
Marble casting	32
Closed molding	35
Gel coat	35

[a]May vary by at least ±5 percentage points.

Florida Department of Environmental Regulation

Twin Towers Office Bldg. ● 2600 Blair Stone Road ● Tallahassee, Florida 32399-2400

Bob Martinez, Governor Dale Twachtmann, Secretary John Shearer, Assistant Secretary

July 18, 1989

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. John A. Cronkhite
Sr. Vice President/General Counsel
Sea Ray Boats, Inc.
2600 Sea Ray Blvd.
Knoxville, TN 37914

Dear Mr. Cronkhite:

Re: Revised Emission Factors - Sykes Creek Facility
(Permit No. AC 05-151435)

The above permit is amended as stated below to reflect the revised emission factors in your letter dated April 28, 1989:

Present Specific Condition No. 4:

4. Hydrocarbon emissions (VOC) shall not exceed the following calculated values and total VOC emissions from the facility shall not exceed 49.8 lbs/hr, 797 lbs/day (30 day average), and 95.6 tons/year. Compliance shall be demonstrated by applying the following raw material utilization rates and emission factors:

	Utilization Rate lbs/hr	Emission Factor	Emissions lbs/hr
Styrene	372.5	0.08	29.80
Methyl Methacrylate	49.5	0.08	3.96
MEKP	4.7	0.10	0.47
1,1,1-Trichloroethane	3.5	0.66	2.31
Acetone	12.5	0.50	6.25
Bottom Paint	11.7	0.60	7.02

New Specific Condition No. 4:

4. Hydrocarbon emissions (VOC) shall not exceed the following calculated values and total VOC emissions from the facility shall not exceed 30 lbs/hr, 480 lbs/day (30 day average), and 57.5 tons/year. Compliance shall be demonstrated by applying the following raw material utilization rates and emission factors over a 90-day period.

	Utilization Rate lbs/hr	Emission Factor	Emissions lbs/hr	
Styrene (Resin)	119.5	0.06	7.17	
Styrene (Gel Coat)	14.9	0.30	4.46	11.63 vs. 9.07
Methyl Methacrylate	49.5	0.05	2.48	
MEKP	4.7	0.10	0.47	.06
1,1,1-Trichloroethane	3.5	0.60	2.10	2.34
Acetone	6.25	1.00	6.25	4.36
Bottom Paint	11.7	0.60	7.02	2.28

New Specific Condition No. 4A:

4.A. Nonvolatile acetone substitutes shall be used to the maximum extent practicable to further reduce the quantity of acetone consumed.

New Specific Condition No. 8:

8. By January 31, 1990, Sea Ray Boats shall submit a conceptual plan and potential course of action that will provide the Department with reasonable assurance that objectionable odors and toxic air pollutants in quantities that could exceed acceptable ambient concentrations will not be discharged off of the facility's property boundary or where the public has access, whichever is closest, pursuant to F.A.C. Rules 17-2.200 and 17-2.620(1) and (2). The plan should contain at a minimum, but not be limited to, various control system strategies that might be installed to reduce or eventually eliminate emissions of VOC/OS from each type of operation, associated time and cost analyses, and VOC/OS substitutes.

This amendment letter shall become attachment No. 2 to your construction permit AC 05-151435.

Sincerely,

Dale Twachtmann
Secretary

DT/kt

cc: C. Collins, Central District
G. E. Cantelou, Jr., P.E.

State of Florida
DEPARTMENT OF ENVIRONMENTAL REGULATION

For Routing To Other Than The Addressee

To. _____ Location _____
To. _____ Location _____
To _____ Location _____
From _____ Date _____

Interoffice Memorandum

TO: Dale Twachtmann

FROM: Steve Smallwood

DATE: July 18, 1989

SUBJ: Modification of Permit Number: AC 05-151435
Sea Ray Boats, Inc.

Attached for your approval and signature is a letter modifying the emission factors of Sea Ray Boat's permit for their Sykes Creek boat plant. The new factors more accurately reflect the actual emissions from the facility.

I recommend your approval and signature.

SS/JR/t

attachment

Florida Department of Environmental Regulation

Twin Towers Office Bldg. ● 2600 Blair Stone Road ● Tallahassee, Florida 32399-2400

Bob Martinez, Governor | Dale Twachtmann, Secretary | John Shearer, Assistant Secretary

June 20, 1990

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. John A. Cronkhite
Sr. Vice President/General Counsel
Sea Ray Boats, Inc.
2600 Sea Ray Blvd.
Knoxville, TN 37914

Dear Mr. Cronkhite:

Re: Revised Emission Factors - Sykes Creek Facility
(Permit No. AC 05-151435)

The above permit is amended as stated below to reflect the revised emission factors in your letter dated May 7, 1990:

Present Specific Condition No. 4:

4. Hydrocarbon emissions (VOC) shall not exceed the following calculated values and total VOC emissions from the facility shall not exceed 30 lbs/hr, 480 lbs/day (30 day average), and 57.5 tons/year. Compliance shall be demonstrated by applying the following raw material utilization rates and emission factors over a 90-day period:

	Utilization Rate lbs/hr	Emission Factor	Emissions lbs/hr
Styrene (Resin)	119.5	0.06	7.17
Styrene (Gel Coat)	14.9	0.30	4.46
Methyl Methacrylate	49.5	0.05	2.48
MEKP	4.7	0.10	0.47
1,1,1-Trichloroethane	3.5	0.60	2.10
Acetone	6.25	1.00	6.25
Bottom Paint	11.7	0.60	7.02

New Specific Condition No. 4:

4. Hydrocarbon emissions (VOC) shall not exceed the following calculated values and total VOC emissions from the facility shall not exceed 30 lbs/hr, 480 lbs/day (30 day average), and 57.5 tons/year. Compliance shall be demonstrated by applying the following raw material utilization rates and emission factors over a 90-day period.

New Specific Condition No. 4 cont'd:

	Utilization Rate lbs/hr	Emission Factor	Emissions lbs/hr
Styrene (Resin)	119.5	0.06	7.17
Styrene (Gel Coat)	14.9	0.30	4.46
Methyl Methacrylate	49.5	0.05	2.48
MEKP	4.7	0.10	0.47
1,1,1-Trichloroethane	3.5	0.67	2.34
Acetone	6.3	1.00	6.30
Bottom Paint	11.7	0.60	7.02

Present Specific Condition No. 8:

8. By January 31, 1990, Sea Ray Boats shall submit a conceptual plan and potential course of action that will provide the Department with reasonable assurance that objectionable odors and toxic air pollutants in quantities that could exceed acceptable ambient concentrations will not be discharged off of the facility's property boundary or where the public has access, whichever is closest, pursuant to F.A.C. Rules 17-2.200 and 17-2.620(1) and (2). The plan should contain at a minimum, but not be limited to, various control system strategies that might be installed to reduce or eventually eliminate emissions of VOC/OS from each type of operation, associated time and cost analyses, and VOC/OS substitutes.

New Specific Condition No. 8:

8. By January 31, 1991, Sea Ray Boats shall submit a conceptual plan and potential course of action that will provide the Department with reasonable assurance that objectionable odors and toxic air pollutants in quantities that could exceed acceptable ambient concentrations will not be discharged off of the facility's property boundary or where the public has access, whichever is closest, pursuant to F.A.C. Rules 17-2.200 and 17-2.620(1) and (2). The plan should contain at a minimum, but not be limited to, various control system strategies that might be installed to reduce or eventually eliminate emissions of VOC/OS from each type of operation, associated time and cost analyses, and VOC/OS substitutes.

This amendment letter shall become attachment No. 3 to your construction permit AC 05-151435.

Sincerely,

for STEVE SMALLWOOD, P.E.
Director
Division of Air Resources
Management

SS/JR/plm

c: C. Collins, Central District
G. E. Cantelou, Jr., P.E.

CANTELOU ASSOCIATES

RECEIVED
MAY 17 1990
DER - BAQM

May 7, 1990

Mr. Clair Fancy
Chief Bureau of Air Regulation
Florida Department of Environmental Regulation
2600 Blair Stone Road
Tallahassee, FL 32399-2400

RE: AC05-151435
Sea Ray Boats, Inc.
Sykes Creek Plant
Merritt Island, Florida

Dear Mr. Fancy:

Please accept this letter as a formal request for two modifications to the referenced construction permit.

We have had discussions with Mr. Collins and Mr. Turner of the DER district office and are advised that we should have our construction permit modified to cover an exceedance discovered due to an underestimate of carpet glue required in the manufacture of certain models fo boats. Be advised that our original estimates (those contained in the construction permit application) were based entirely on theory since these boats had not been built before, and the actual use the glue was about ten percent greater than originally projected.

We therefore request that the facilities permitted emission rate of 1,1,1-trichloroethane be modified to 2.34 #/hr over an 8 hour period instead of 2.10 #/hr over a 16 hour period (permitted rate).

We also request that Specific Condition #8's due date be extended, since it was our intent to produce an air model using the parameters of the operation permit to demonstrate acceptable ambient concentrations.

Thank you for your considerations. If you have any questions, please call me at (803) 648-9300.

Yours truly,

G. E. Cantelou, Jr. P.E.

cc: E. Cupples
C. Collins
T. Andrews

401 Park Ave. S.W. / P.O. Box 3102 / Aiken, S.C. 29802 / (803) 648-9300

CANTELOU ASSOCIATES
ENGINEERING - PLANNING

May 3, 1990

Florida Department of Environmental Regulation
3319 Maguire Boulevard
Suite 232
Orlando, Florida 32803-3767

Attention: John Turner

RE: Sea Ray Boats, Inc.
Completeness Air Summary
AC05-151435
Sykes Creek Plant
Merritt Island, Florida

Dear Mr. Turner:

The following items are submitted in response to your letter of April 18, 1990.

Exhibit 1. Letter of authorization for Jeff Skuda.

Exhibit 2. Calculated compliance results.

Exhibit 3. Clarification of utilization rates, emission rates and assumptions, and potential emissions.

Exhibit 4. Copy of letter to Mr. Clair Fancy regarding construction permit modification.

Exhibit 5. Same as Exhibit "4" for conceptual plan for Permit Specific Condition No. 8.

The visible emission test results will be resubmitted when the permit applications for AC05-165270 and AC05-165271 are completed and submitted.

If you require additional information, please advise.

Yours truly,

G. E. Cantelou, IV. P.E.

GEC/sc

Enclosures

401 Park Ave. S.W. / P.O. Box 3102 / Aiken, S.C. 29802 / (803) 648-9300

SEA RAY BOATS, INC.
WORLD HEADQUARTERS, 2600 SEA RAY BLVD., KNOXVILLE, TENNESSEE 37914 (615) 522-4181

May 1, 1990

Florida Department of Environmental Regulation
Air Resources Management Section
3319 Maguire Boulevard
Orlando, FLorida 32803-3767

RE: Operational Permit (Ref. #AC05-151435)

To Whom It May Concern:

Please be advised that Jeff Skuda is authorized by Sea Ray Boats, Inc., to sign and make application for our operational permit (noted above). If any additional information is needed, please feel free to contact me.

Thank you in advance for your cooperation.

Sincerely,

SEA RAY BOATS, INC.

Gary W. Stoecker
Senior Vice President/Manufacturing

GWS:cbh

EXHIBIT "2"

	PERMITTED (#/HR)	ACTUAL (#/HR)
STYRENE (RESIN & GELCOAT)	11.63	9.07
METHYL METHACRYLATE	2.48	0.0
MEKP	0.47	0.06
1,1,1-TRICHLOROETHANE	2.10	2.34
ACETONE	6.25	4.18
BOTTOM PAINT	7.02	2.28

EXHIBIT "3"

ACTUAL EMISSIONS

STYRENE:
(9.07 #/hr) (48 wk/yr X 5 days/wk X 8 hr/day) = 17,414 #/yr = 8.7 T/

METHYL METHACRALATE:
NO LONGER A COMPONENT IN THE GELCOATS USED,
STYRENE WAS SUBSTITUTED BY MANUFACTURER

MEK:
(0.06 #/hr) (48 wk/yr X 5 days/wk X 8 hr/day) = 115 #/yr = .06 T/

1,1,1-TRICHLOROETHANE:
(2.34 #/hr) (48 wk/yr X 5 days/wk X 8 hr/day) = 4,493 #/yr = 2.2 T/

ACETONE:
(4.18 #/hr) (48 wk/yr X 5 days/wk X 8 hr/day) = 8,026 #/yr = 4.0 T/

BOTTOM PAINT & MISC:
(2.28 #/hr) (48 wk/yr X 5 days/wk X 8 hr/day) = 4,378 #/yr = 2.2 T/

POTENTIAL EMISSIONS

STYRENE:
(11.63 #/hr)(48 wk/yr X 5 days/wk X 8 hr/day) = 22,330 #/yr = 11.2 T/y

METHYL METHACRALATE:
(2.48 #/hr) (48 wk/yr X 5 days/wk X 8 hr/day) = 4,762 #/yr = 2.4 T/y

MEK:
(0.47 #/hr) (48 wk/yr X 5 days/wk X 8 hr/day) = 902 #/yr = .45 T/y

1,1,1-TRICHLOROETHANE:
(2.10 #/hr) (48 wk/yr X 5 days/wk X 8 hr/day) = 4,032 #/yr = 2.0 T/y

ACETONE:
(6.25 #/hr) (48 wk/yr X 5 days/wk X 8 hr/day) = 12,000 #/yr = 6.0 T/y

BOTTOM PAINT:
(7.02 #/hr) (48 wk/yr X 5 days/wk X 8 hr/day) = 13,478 #/yr = 6.7 T/y

CANTELOU ASSOCIATES
CONSULTING ENGINEERS
SURVEYORS & PLANNERS

April 28, 1989

John Reynolds
DER
2600 Blairstone Road
Tallahassee, FL 32399

RE: Sykes Creek
Construction Permit No. AC 05-151435

Dear Mr. Reynolds:

After obtaining additional information from manufacturers, we are planning with your permission to use the following numbers in emission calculations for Sykes Creek:

Styrene emissions (resin) = Wt. of resin x
% by wt. of styrene x
6% volatilized

Styrene emissions (gelcoat) = Wt. of gelcoat x
% by wt. of styrene x
30% volatilized

Methyl Methacralate (gelcoat) = Wt. of gelcoat x
% by wt. of styrene x
100% volatilized

If you have any questions, please feel free to call.

Yours truly,

G. E. Cantelou, Jr. P. E.

GEC:sc

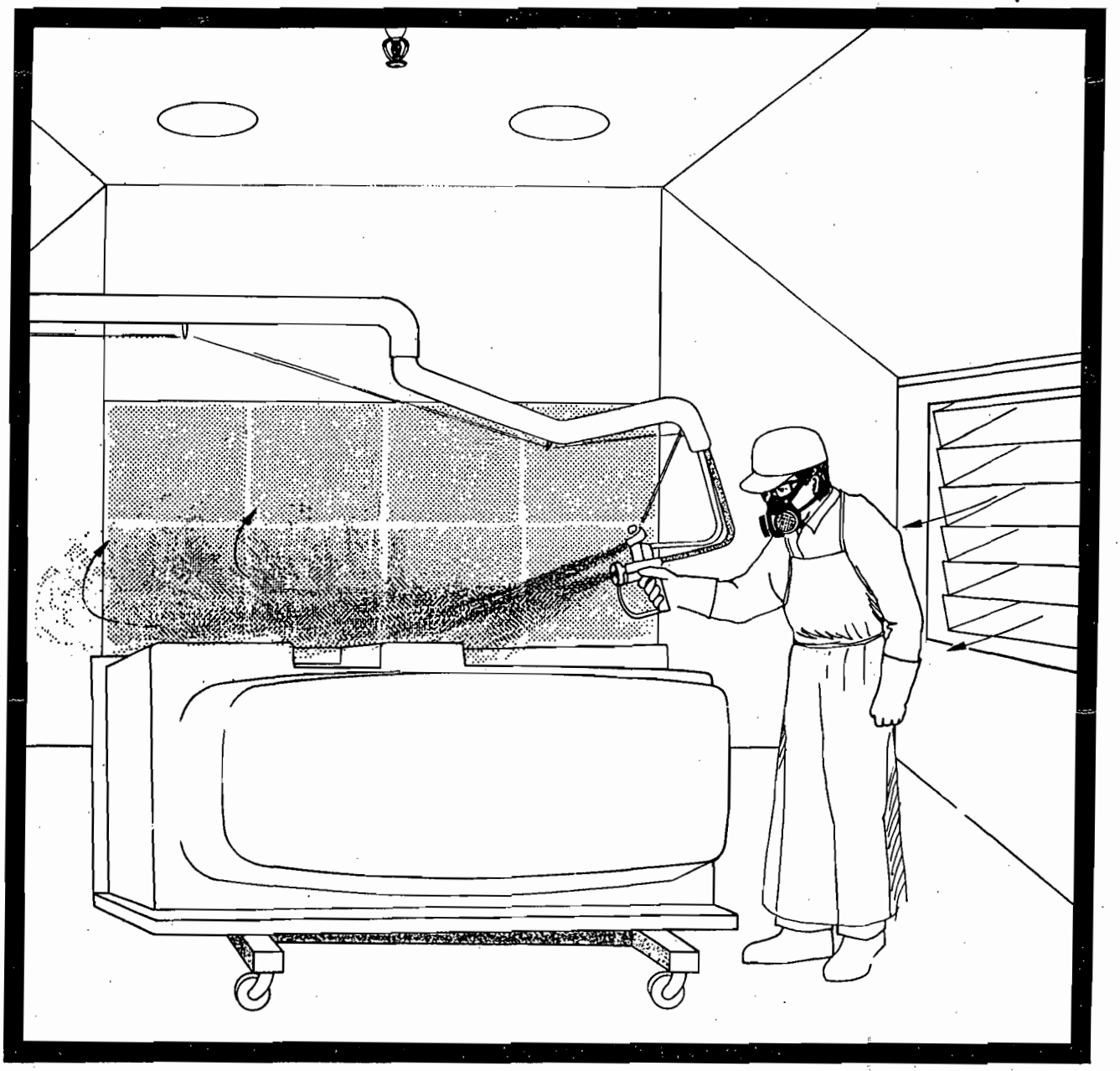
Enclosures

1359 Silver Bluff Rd. Suite B-3 / P.O. Box 3102 / Aiken, S.C. 29802 / (803) 648-9300

Occupational Exposures to Styrene

and Other Health Hazards in the Fiberglass Reinforced Plastics Industry

A Special Studies Report by CAL OSHA



Department of Industrial Relations

State of California
George Deukmejian, Governor
Ron Rinaldi, Director of Industrial Relations

worker performed almost continuous spraying while standing on a portable platform that was inserted into the tank that also supported a large duct with high velocity airflow that exhausted vapors very close to the point of generation.

Two facilities, using a unique production process to ensure good secondary bonding between resin layers, also had the side effect of obtaining low ambient exposure levels from the process. After gelcoating and hand laminating the mold,the part was covered with plastic sheeting and a vacuum pulled while the part is curing. Covering the part and pulling a vacuum through the space between the part and the plastic, removes styrene vapor from the work place air and reduces employee exposure.

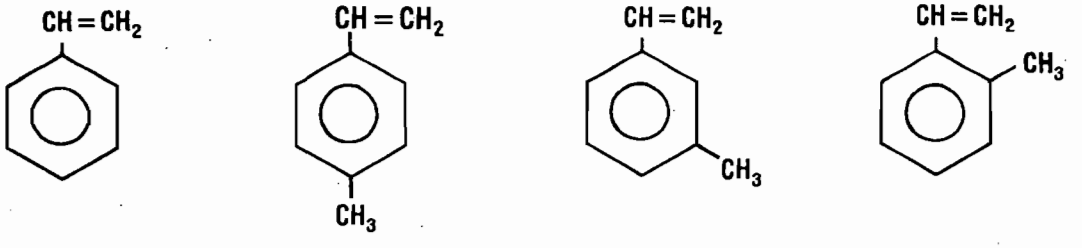
The majority of companies which installed some form of dilution ventilation, for example, filter banks on the walls that pull a large volume of air, were mostly ineffective. They were either too far from the source of the exposure or were defeated by lack of directionality and turbulence.

Substitution

NIOSH estimates that approximately 6% of styrene monomer in a 40/60 polyester resin mixture vaporizes during the curing process. Methyl styrene (also called vinyl toluene) is a close chemical cousin of styrene that has a lower vapor pressure, reducing the amount of vaporization. Methyl styrene has three isomers, para, meta, or the ortho form. Two production facilities were using a resin mixture containing 60% polyester, 14% styrene and 26% para-methyl styrene.

FIGURE V.3

Styrene and the Three Isomers of Methyl Styrene



STYRENE Para methyl styrene Meta methyl styrene Ortho methyl styrene

TABLE 4.12-2. EMISSION FACTORS FOR UNCONTROLLED POLYESTER RESIN PRODUCT FABRICATION PROCESSES[a]
(100 x mass of VOC emitted/mass of monomer input)

Process	Resin		Emission Factor Rating	Gel Coat		Emission Factor Rating
	NVS	VS[b]		NVS	VS[b]	
Hand layup	5 - 10	2 - 7	C	26 - 35	8 - 25	D
Spray layup	9 - 13	3 - 9	B	26 - 35	8 - 25	B
Continuous lamination	4 - 7	1 - 5	B	[c]	[c]	---
Pultrusion[d]	4 - 7	1 - 5	D	[c]	[c]	---
Filament winding[e]	5 - 10	2 - 7	D	c	c	---
Marble casting	1 - 3	1 - 2	B	[f]	[f]	---
Closed molding[g]	1 - 3	1 - 2	D	c	c	---

midrange = 30%

[a]Reference 9. Ranges represent the variability of processes and sensitivity of emissions to process parameters. Single value factors should be selected with caution. NVS = nonvapor-suppressed resin. VS = vapor-suppressed resin.
[b]Factors are 30-70% of those for nonvapor-suppressed resins.
[c]Gel coat is not normally used in this process.
[d]Resin factors for the continuous lamination process are assumed to apply.
[e]Resin factors for the hand layup process are assumed to apply.
[f]Factors unavailable. However, when cast parts are subsequently sprayed with gel coat, hand and spray layup gel coat factors are assumed to apply.
[g]Resin factors for marble casting, a semiclosed process, are assumed to apply.

TABLE 4.12-3. TYPICAL RESIN STYRENE PERCENTAGES

Resin Application	Resin Styrene Content[a] (wgt. %)
Hand layup	43
Spray layup	43
Continuous lamination	40
Filament winding	40
Marble casting	32
Closed molding	35
Gel coat	35

[a]May vary by at least ±5 percentage points.

Florida Department of Environmental Regulation

Twin Towers Office Bldg. ● 2600 Blair Stone Road ● Tallahassee, Florida 32399-2400

Bob Martinez, Governor Dale Twachtmann, Secretary John Shearer, Assistant Secretary

November 8, 1990

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. John A. Cronkhite
Senior Vice President/General Counsel
Sea Ray Boats, Inc.
2600 Sea Ray Boulevard
Knoxville, Tennessee 37914

Dear Mr. Cronkhite:

The Department received your September 13, 1990, request for an extension of the expiration dates and revision of emission limits for the construction permits referenced below. The request is acceptable and the following shall be changed:

PROJECT	FROM	TO
AC 05-165270	September 30, 1990	December 31, 1990
AC 05-165271	September 30, 1990	December 31, 1990

Specific Condition No. 4 (AC 05-165270):

FROM:

Hydrocarbon emissions (VOC) shall not exceed the following calculated values and total VOC emissions from the facility shall not exceed 65.5 lbs/hr, 1048 lbs/day (30 day average), and 125.8 tons/year. Compliance shall be demonstrated by applying the following raw material utilization rates and emission factors:

	Utilization Rate lbs/hr	Emission Factor	Emissions lbs/hr
Styrene (Resin)	272.5	0.06	16.4
Styrene (Gel Coat)	37.7	0.30	11.3
Methyl Methacrylate	125.7	0.05	6.3
Methylene Chloride	2.5	0.30	0.8
Aromatic Hydrocarbon	21.9	0.16	3.5
1,1,1-Trichloroethane	2.5	0.60	1.5
Acetone	24.4	1.00	24.4
Xylene	21.9	0.06	1.3

TO:

Hydrocarbon emissions (VOC) shall not exceed the following calculated values and total VOC emissions from the facility shall not exceed 60.7 lbs/hr, 971.2 lbs/day (30 day average), and 105.6 tons/year. Compliance shall be demonstrated by applying the following raw material utilization rates and emission factors:

	Utilization Rate lbs/hr	Emission Factor	Emissions lbs/hr
Styrene (Resin)	258.9	0.06	15.5
Styrene (Gel Coat)	49.3	0.30	14.8
Methyl Methacrylate	94.8	0.05	4.7
Toluene	9.5	0.08	0.8
1,1,1-Trichloroethane	9.5	0.68	6.4
Acetone	11.6	1.00	11.6
Paints (Misc.)	16.8	0.41	6.9

Specific Condition No. 4 (AC 05-165271):

FROM:

Hydrocarbon emissions (VOC) shall not exceed the following calculated values and total VOC emissions from the facility shall not exceed 26.2 lbs/hr, 420 lbs/day (30 day average), and 50.5 tons/year. Compliance shall be demonstrated by applying the following raw material utilization rates and emission factors:

	Utilization Rate lbs/hr	Emission Factor	Emissions lbs/hr
Styrene (Resin-AME)	10.2	0.06	0.6
Styrene (Resin-RCI)	40.8	0.06	2.5
Styrene (Gel coat)	6.4	0.30	1.9
Methyl Methacrylate	18.3	0.05	0.9
1,1,1-Trichloroethane	0.2	0.68	0.1
Acetone	20.1	1.00	20.1
Toluene	0.2	0.08	0.02
Misc.	0.1	1.00	0.1

TO:

Hydrocarbon emissions (VOC) shall not exceed the following calculated values and total VOC emissions from the facility shall not exceed 26.2 lbs/hr, 420 lbs/day (30 day average), and 50.5 tons/year. Compliance shall be demonstrated by applying the following raw material utilization rates and emission factors:

	Utilization Rate lbs/hr	Emission Factor	Emissions lbs/hr
Styrene (Resin-AME)	10.2	0.06	0.6
Styrene (Resin-RCI)	40.8	0.06	2.5
Styrene (Gel coat)	6.4	0.30	1.9
Methyl Methacrylate	18.3	0.05	0.9
1,1,1-Trichloroethane	0.6	0.68	0.4
Acetone	19.8	1.00	19.8
Toluene	0.6	0.08	0.05
Misc.	0.1	1.00	0.1

Attachment to be Incorporated:

Letters from Sea Ray Boats, Inc. dated September 13, 1990 requesting a change in the expiration dates and emission limits.

A copy of this letter must be attached to the above construction permits and shall become a part of these permits.

Sincerely,

STEVE SMALLWOOD, P.E.
Director
Division of Air Resources
Management

SS/JR/plm

c: C. Collins, Central Dist.
G. E. Cantelou, Jr., P.E.

CANTELOU ASSOCIATES
ENGINEERING - PLANNING

September 7, 1990

Mr. Clair Fancy
Chief Bureau of Air Regulation
Florida Department of Environmental Regulation
2600 Blair Stone Road
Tallahassee, FL 32399-2400

RE: AC05-165271
Sea Ray Boats, Inc.
Product Development & Engineering
Merritt Island, Florida

Dear Mr. Fancy:

Please accept this letter as a formal request for modifications to the referenced construction permit.

Since P. D. & E. engineers and builds prototypes and does not manufacture a specific line of boats, the original estimates on the construction permit were based entirely on theory. We request the following modifications:

1) The permit be revised to group all styrene emissions (contained in resin & gelcoat) together regardless of brand to determine compliance. Various types and combinations of resins and gelcoats are used.

NO different emissions factors

2) Due to an underestimate on the amount of glue used we request that the facilities permitted emission rate of 1,1,1-trichloroethane/toluene be modified to 0.63 #/hr which would modify emissions to 0.43 #/hr for 1,1,1-trichloroethane and 0.05 #/hr for toluene.

If you find this request for modification acceptable please substitute page four, Exhibit "A", and Exhibit "D" marked "REVISED" in the permit application.

Thank you for your considerations. If you have any questions, please call me at (803) 648-9300.

Yours truly,

G. E. Cantelou, Jr. P.E.

GEC/sc

cc: John Turner
G. Reynolds

401 Park Ave. S.W. / P.O. Box 3102 / Aiken, S.C. 29802 / (803) 648-9300

RE: Merritt Island airpollution permit application

ATTACHMENT II

ACTUAL EMISSIONS (1988 USAGE)

EMISSIONS = (EMISSION RATE)(UTILIZATION RATE)(COMPONENT PERCENTAGE)

STRENE: RESIN (.06)(736.4 #/hr)(0.37) = 16.3 #/hr (See Page A)
GEL COAT + (.30)(125.7 #/hr)(0.30) = 27.7 #/hr = 53.1 T/yr
(See Page F) (See Page G) (See Page B)

METHYL METHACRALATE:
GEL COAT (1.0)(125.7 #/hr)(0.05) = 6.3 #/hr = 12.1 T/yr
(Assume 100% volatile) (See Page B)

ACETONE: **
ACETONE 318,165 (TOTAL) - 97,068 (RECYCLED) = (See Page C)
221,097 # emitted/yr = 38.4 #/hr = 110.6 T/yr
(100% volatile)

1,1,1-TRICHLOROETHANE: (1.0)(2.52 #/hr)(0.60) = 1.51 #/hr = 2.9 T/yr (See Page D) 57.6

METHYLENE CHLORIDE: (1.0)(2.52 #/hr)(0.30) = 0.76 #/hr = 1.4 T/yr

AROMATIC HYDROCARBON: (1.0)(21.95 #/hr)(.162) = 3.56 #/hr = 6.8 T/yr (See Page E)

XYLENE: (1.0)(21.95 #/hr)(0.63) = 1.38 #/hr = 2.7 T/yr
(Assuming 100% Volatile)

decimal misplaced but correct answer

** ACTUAL EMISSIONS BASED ON NEW WEEKLY USE OF ACETONE WOULD BE:

(600 GAL/WK (USED) - 275 GAL/WK (RECYCLED) X (6.61 #/GAL) x (48 WKS/YR) =
103,116 #/yr = 17.9 #/hr = 51.56 T/yr

New sheet with decimal in correct place attached.

ATTACHMENT II

ACTUAL EMISSIONS (1988 USAGE)

EMISSIONS = (EMISSION RATE)(UTILIZATION RATE)(COMPONENT PERCENTAGE)

STRENE: RESIN (.06)(736.4 #/hr)(0.37)
GEL COAT + (.30)(125.7 #/hr)(0.30) = 27.7 #/hr = 53.1 T/yr

METHYL METHACRALATE:
GEL COAT (1.0)(125.7 #/hr)(0.05) = 6.3 #/hr = 12.1 T/yr

ACETONE: **
ACETONE 318,165 (TOTAL) - 97,068 (RECYCLED) =
221,097 # emitted/yr = 38.4 #/hr =110.6 T/yr

1,1,1-TRICHLOROETHANE:
(1.0)(2.52 #/hr)(0.60) = 1.51 #/hr = 2.9 T/yr

METHYLENE CHLORIDE: (1.0)(2.52 #/hr)(0.30) = 0.76 #/hr = 1.4 T/yr

AROMATIC HYDROCARBON:
(1.0)(21.95 #/hr)(.162) = 3.56 #/hr = 6.8 T/yr

XYLENE: (1.0)(21.95 #/hr)(.063) = 1.38 #/hr = 2.7 T/yr

** ACTUAL EMISSIONS BASED ON NEW WEEKLY USE OF ACETONE WOULD BE:

(600 GAL/WK (USED) - 275 GAL/WK (RECYCLED) X (6.61 #/GAL) x (48 WKS/YR) =
103,116 #/yr = 17.9 #/hr = 51.56 T/yr

A

Material Safety Data Sheet

Alpha Resins Corporation
4620 N. Galloway Road
Lakeland, FL 33805

Product: UNSATURATED POLYESTER RESIN
Internal ID: 80-603

MSDS No: ALPHA / 001
Revision: March 20, 1989
Date: March 20, 1989

National Paint and Coatings Association Hazardous Material Identification System

HEALTH HAZARD	2
FLAMMABILITY HAZARD	3
REACTIVITY HAZARD	2
PERSONAL PROTECTION	I

SECTION I. MATERIAL IDENTIFICATION

Trade/Material Name: UNSATURATED POLYESTER RESIN

Description: Diacid/Glycol condensate

Other Designations: none

CAS: mixture **Trade Secret Register:** N/A

Chemical Name: Polyester Resin

Manufacturer: Alpha Resins Corporation **Phone:** (813)858-4431

SECTION II. INGREDIENTS AND HAZARDS

Ingredient Name:	CAS Number:	Percent:	Exposure Limits:
Styrene	100-42-5	37%	50 ppm

SARA 313 INFORMATION: This product contains the above substance which is subject to the reporting requirements of section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372.

SECTION III. PHYSICAL DATA

Appearance & Odor: Viscous Liquid with a Sweet Pungent Odor.

Boiling point: 293°F
Vapor pressure: <4.5mmHg
Water solubility (%): very slight
Vapor density (air=1): 3.6
pH: N/A

Evaporation rate: 3.1
Specific gravity (H_2O=1): 1.0 - 1.1
Melting point: N/A
% volatile by volume: 43%
Molecular weight: undetermined

"B"

Gel Coat

JAN 1 8 1989

MATERIAL SAFETY DATA SHEET

SECTION I - MANUFACTURERS INFORMATION

PRODUCT CODE/IDENTITY: 0944W969
NAME : COOK PAINT AND VARNISH COMPANY
ADDRESS: P.O. BOX 419389
KANSAS CITY, MO 64141-6309

PRODUCT NAME: WHITE-WINTER-101-147
DATE OF MSDS: 04/29/88
EMERGENCY TELEPHONE: 816-391-6000
INFORMATION TELEPHONE: 816-391-6003

ATTN: SAFETY AND HEALTH OFFICER
SEA RAY BOAT M.I.
PO BOX 541257
MERRIT ISLD FL 329541257

CUSTOMER NUMBER: 220094
DATE PRINTED: 01/11/8
COMPLEX: 700

SECTION II - HAZARDOUS INGREDIENTS

STYRENE MONOMER

CAS #: 000100-42-5 WT. %: 30.000 VAPOR PRESSURE: 4.5 (MMHG/DEG F)

EXPOSURE LIMIT:
ACGIH TLV/TWA: 50 PPM (SKIN) (215 MG/CU.M.)
ACGIH TLV/STEL: 100 PPM (SKIN) (425 MG/CU.M.)
OSHA PEL: 100 PPM (425 MG/CU.M.)
OSHA PEL/CEILING: 200 PPM (850 MG/CU.M.)
OTHER: OSHA: 600 PPM/5 MIN/3 HR PEAK

SILICA, AMORPHOUS

CAS #: 007631-86-9 WT. %: LESS THAN 5 VAPOR PRESSURE: N/A (MMHG/DEG F)

EXPOSURE LIMIT:
ACGIH TLV/TWA: 10MG/CU.M. TOTAL DUST
OSHA PEL: 20M PPCF AS DUST

TALC (HYDROUS MAGNESIUM SILICATE)

CAS #: 014807-96-6 WT. %: 10.000 VAPOR PRESSURE: N/A (MMHG/DEG F)

EXPOSURE LIMIT:
ACGIH TLV/TWA: 2 MG/M3 RESPIRABLE DUST
OSHA PEL: 20 M PPCF

ETHYL METHACRYLATE

CAS #: 000080-62-6 WT. %: 5.000 VAPOR PRESSURE: 29.0 (MMHG/DEG F)

EXPOSURE LIMIT:
ACGIH TLV/TWA: 100 PPM (410 MG/CU.M.)
OSHA PEL: 100 PPM (410 MG/CU.M.)

MAXIMUM VOC NOT CONSUMED DURING CURING IS 40 GRAM/LITER (OR 230 GRAMS/SQUARE METER OF SURFACE AREA OPEN TO AIR). MAXIMUM VOC OF UNCATALYZED RESINS AND GEL COATS IS 600 GRAMS/LITER.

THIS MATERIAL CONTAINS INGREDIENTS COVERED BY THE CALIFORNIA "SAFE DRINKING WATER AND TOXIC ENFORCEMENT ACT OF 1986" (PROPOSITION 65).

SECTION III - HEALTH HAZARD DATA

EFFECTS OF OVEREXPOSURE TO PRODUCT. PRIMARY ROUTES OF ENTRY ARE:

EYE CONTACT: IRRITATION. SYMPTOMS ARE TEARING, REDNESS AND DISCOMFORT.

SKIN CONTACT: IRRITATION. CAN CAUSE DEFATTING OF SKIN WHICH MAY LEAD TO DERMATITIS.

"C"

72-62-7820-01

MATERIAL SAFETY DATA SHEET

Ashland Chemical Company
DIVISION OF ASHLAND OIL, INC.
P. O. BOX 2219, COLUMBUS, OHIO 43216 • (614) 889-3333
24-HOUR EMERGENCY TELEPHONE (606) 324-1133

MAR 0 8 198 Ashland.

003980

ACETONE

THIS MSDS COMPLIES WITH 29 CFR 1910.1200 (THE HAZARD COMMUNICATION STANDARD)

****

Product Name: ACETONE
CAS NUMBER: 67-64-1

Data Sheet No: 0004335-004
Prepared: 12/22/88
Supersedes: 03/04/86

05 50 093 7980090-

SEA-RAY BOATS INC
100 SEA RAY DR
MERRITT ISLAND FL 32952

PRODUCT: 3010000
INVOICE: 120472
INVOICE DATE: 02/21/89
TO: SEA-RAY BOATS INC
100 SEA RAY DR
MERRITT ISLAND FL 32952

ATTN: PLANT MGR./SAFETY DIR.

SECTION I - PRODUCT IDENTIFICATION

General or Generic ID: KETONE

DOT Hazard Classification: FLAMMABLE LIQUID (173.115)

SECTION II - COMPONENTS

IF PRESENT, IARC, NTP AND OSHA CARCINOGENS AND CHEMICALS SUBJECT TO THE REPORTING REQUIREMENTS OF SARA TITLE III SECTION 313 ARE IDENTIFIED IN THIS SECTION.
SEE DEFINITION PAGE FOR CLARIFICATION

INGREDIENT	% (by WT)	PEL	TLV	Note
ACETONE CAS #: 67-64-1	100	1000 PPM	750 PPM	(1)

Notes:

(1) ACGIH - SHORT TERM EXPOSURE LIMIT (STEL) FOR ACETONE IS 1000 PPM. NIOSH RECOMMENDS A LIMIT OF 250 PPM, 8-HOUR TWA.

THIS CHEMICAL IS SUBJECT TO THE REPORTING REQUIREMENTS OF SECTION 313 OF SARA TITLE III.

SECTION III - PHYSICAL DATA

Boiling Point	for PRODUCT	133.00 Deg F (56.11 Deg C) @ 760.00 mm Hg
Vapor Pressure	for PRODUCT	181.70 mm Hg @ 68.00 Deg F (20.00 Deg C)
Specific Vapor Density	AIR = 1	2.0
Specific Gravity		.785 - .788 @ 77.00 Deg F (25.00 Deg C)
Percent Volatiles		100.00%
Evaporation Rate	(N-BUTYL ACETATE = 1)	6.00

SECTION IV - FIRE AND EXPLOSION INFORMATION

FLASH POINT(TCC) 0.0 Deg F (-17.8 Deg C)

EXPLOSIVE LIMIT (PRODUCT) LOWER - 2.6% UPPER - 12.8%

EXTINGUISHING MEDIA: ALCOHOL FOAM OR CARBON DIOXIDE OR DRY CHEMICAL

HAZARDOUS DECOMPOSITION PRODUCTS: MAY FORM TOXIC MATERIALS:, CARBON DIOXIDE AND CARBON MONOXIDE, VARIOUS HYDROCARBONS, ETC.

FIREFIGHTING PROCEDURES: WEAR SELF-CONTAINED BREATHING APPARATUS WITH A FULL FACEPIECE OPERATED IN THE POSITIVE PRESSURE DEMAND MODE WHEN FIGHTING FIRES.

SPECIAL FIRE & EXPLOSION HAZARDS: MATERIAL IS HIGHLY VOLATILE AND READILY GIVES OFF VAPORS WHICH MAY TRAVEL ALONG THE GROUND OR BE MOVED BY VENTILATION AND IGNITED BY PILOT LIGHTS, OTHER FLAMES, SPARKS, HEATERS, SMOKING, ELECTRIC MOTORS, STATIC DISCHARGE, OR OTHER IGNITION SOURCES AT LOCATIONS DISTANT FROM MATERIAL HANDLING POINT.

NEVER USE WELDING OR CUTTING TORCH ON OR NEAR DRUM (EVEN EMPTY) BECAUSE PRODUCT (EVEN JUST RESIDUE) CAN IGNITE EXPLOSIVELY.

ALL FIVE GALLON PAILS AND LARGER METAL CONTAINERS INCLUDING TANK CARS AND TANK TRUCKS SHOULD BE GROUNDED AND/OR BONDED WHEN MATERIAL IS TRANSFERRED.

NFPA CODES: HEALTH- 1 FLAMMABILITY- 3 REACTIVITY- 0

SECTION V - HEALTH HAZARD DATA

PERMISSIBLE EXPOSURE LEVEL	1000	PPM
THRESHOLD LIMIT VALUE	750	PPM

SEE SECTION II

CONTINUED ON PAGE: 2

"D"

MATERIAL SAFETY DATA SHEET

N.F. 2 A

TRADE NAME: CON-BOND 1736 N/F Cement

SECTION I

MANUFACTURER'S NAME	EMERGENCY TELEPHONE NO.
Columbia Cement Co., Inc.	516 623-6000

ADDRESS (Number, Street, City, State, and ZIP Code): 159 Hanse Ave. Freeport, New York 11520

Prepared by: R.J. Dawnkaski Date: 6/5/85

CHEMICAL FAMILY: CHLOROPRENE RUBBER AND SYNTHETIC RESIN SOLUTION IN CHLORINATED ORGANIC SOLVENT

SECTION II - HAZARDOUS INGREDIENTS

INGREDIENT	% WEIGHT	C. A. S. NUMBER	PEL (PPM) OSHA	TLV (PPM) ACGIH
1,1,1 - TRICHLOROETHANE	60	71-55-6	350	350
METHYLENE CHLORIDE	30	75-09-2	500	100

SECTION III - PHYSICAL DATA

BOILING POINT (°F.)	104°-165°F	SPECIFIC GRAVITY (H_2O=1)	1.26
VAPOR PRESSURE (mm Hg.) @ 20°C	210	PERCENT, VOLATILE BY weight (%)	90
VAPOR DENSITY (AIR=1)	3.8	EVAPORATION RATE (n-butyl acetate=1) 1,1,1 Trichloroethane	6
SOLUBILITY IN WATER	Negligible	Methylene Chloride	14.5

APPEARANCE AND ODOR: Amber thin syrup; dyed red or green; slightly sweetish odor

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

FLASH POINT (Method used)	FLAMMABLE LIMITS In Air	LEL	UEL
None - TOC, TCC, COC		7.5	22

EXTINGUISHING MEDIA: WATER FOG

SPECIAL FIRE FIGHTING PROCEDURES: Self contained breathing apparatus with a full face piece operated in pressure-demand or other positive pressure mode. Avoid breathing vapors or fumes.

UNUSUAL FIRE AND EXPLOSION HAZARDS: This solvent has no flash point or fire point as determined by standard laboratory methods. It does, however, have a flammable range when high concentrations of vapor are mixed in air. For this reason, ignition sources should not be present when cleaning closed tanks or in highly confined, unventilated areas.

(Continued on reverse side)

"E"

MATERIAL SAFETY DATA SHEET
FOR COATINGS, RESINS AND RELATED MATERIALS

NAUTICAL COATINGS INC.
P.O. BOX 310305
TAMPA, FLORIDA 33680

DATE OF PREPARATION: 1/4/88

SIGNATURE OF PREPARER: Jan F. Chmiel

EMERGENCY TELEPHONE NO.: 813-536-3789

INFORMATION TELEPHONE NO.: 813-536-3789

SECTION I – PRODUCT IDENTIFICATION

PRODUCT NUMBER: 3400 SERIES

PRODUCT NAME: SEA HAWK CUKOTE ANTI-FOULING COATING

PRODUCT CLASS: CUPROUS OXIDE PAINT

SECTION II – HAZARDOUS INGREDIENTS

INGREDIENT	PERCENT	OCCUPATIONAL EXPOSURE LIMITS TLV	PEL	VAPOR PRESSURE
AROMATIC HYDROCARBON	16.2	35		.3mm@20°C
XYLENE	6.3	100		10mm@28°C

SECTION III – PHYSICAL DATA

BOILING RANGE **VAPOR DENSITY** ☒ HEAVIER ☐ LIGHTER THAN AIR

EVAPORATION RATE ☐ FASTER ☒ SLOWER THAN ETHER % VOLATILE WT. 22.5 WT/GAL 17.8

SECTION IV – FIRE AND EXPLOSION HAZARD DATA

FLAMMABILITY CLASSIFICATION OSHA 1C FLASH POINT 84°F LEL 0.7

DOT FLAMMABLE LIQUID

EXTINGUISHING MEDIA:

☐ FOAM ☐ ALCOHOL ☒ CO2 ☒ WATER FOG ☐ OTHER

UNUSUAL FIRE AND EXPLOSION HAZARDS: KEEP CONTAINER TIGHTLY CLOSED. AVOID HEAT, OPEN FLAMES, STATIC ELECTRICITY, ELECTRICAL EQUIPMENT AND SPARKS. CLOSED CONTAINERS MAY EXPLODE WHEN EXPOSED TO EXTREME HEAT. APPLICATION TO HOT SURFACES REQUIRES SPECIAL PRECAUTIONS. DURING EMERGENCY SITUATION, OVER-EXPOSURE TO DECOMPOSITION PRODUCTS MAY CAUSE A HEALTH HAZARD WITH NO SYMPTOMS IMMEDIATELY APPARENT. OBTAIN MEDICAL ATTENTION.

SPECIAL FIRE FIGHTING PROCEDURES: FULL PROTECTIVE EQUIPMENT INCLUDING SELF-CONTAINED BREATHING APPARATUS SHOULD BE USED. – WATER SPRAY MAY BE INEFFECTIVE. IF WATER IS USED, FOG NOZZLES ARE PREFERABLE

"F"

worker performed almost continuous spraying while standing on a portable platform that was inserted into the tank that also supported a large duct with high velocity airflow that exhausted vapors very close to the point of generation.

Two facilities, using a unique production process to ensure good secondary bonding between resin layers, also had the side effect of obtaining low ambient exposure levels from the process. After gelcoating and hand laminating the mold, the part was covered with plastic sheeting and a vacuum pulled while the part is curing. Covering the part and pulling a vacuum through the space between the part and the plastic, removes styrene vapor from the work place air and reduces employee exposure.

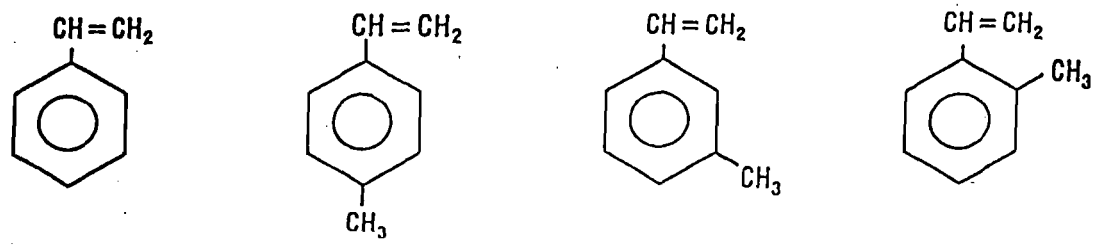
The majority of companies which installed some form of dilution ventilation, for example, filter banks on the walls that pull a large volume of air, were mostly ineffective. They were either too far from the source of the exposure or were defeated by lack of directionality and turbulence.

Substitution

NIOSH estimates that approximately 6% of styrene monomer in a 40/60 polyester resin mixture vaporizes during the curing process. Methyl styrene (also called vinyl toluene) is a close chemical cousin of styrene that has a lower vapor pressure, reducing the amount of vaporization. Methyl styrene has three isomers, para, meta, or the ortho form. Two production facilities were using a resin mixture containing 60% polyester, 14% styrene and 26% para-methyl styrene.

FIGURE V.3

Styrene and the Three Isomers of Methyl Styrene



STYRENE | Para methyl styrene | Meta methyl styrene | Ortho methyl styrene

"G"

EXHIBIT "A" - PART 1

TABLE 4.12-2. EMISSION FACTORS FOR UNCONTROLLED POLYESTER RESIN PRODUCT FABRICATION PROCESSES[a]
(100 x mass of VOC emitted/mass of monomer input)

Process	Resin		Emission Factor Rating	Gel Coat		Emission Factor Rating
	NVS	VS[b]		NVS	VS[b]	
Hand layup	5 - 10	2 - 7	C	26 - 35	8 - 25	D
Spray layup	9 - 13	3 - 9	B	26 - 35	8 - 25	B
Continuous lamination	4 - 7	1 - 5	B	c		
Pultrusion[d]	4 - 7	1 - 5	D	c	c	--
Filament winding[e]	5 - 10	2 - 7	D	c	c	--
Marble casting	1 - 3	1 - 2	B	f	f	--
Closed molding[g]	1 - 3	1 - 2	D	c	c	--

midrange ≈ 30%

[a]Reference 9. Ranges represent the variability of processes and sensitivity of emissions to process parameters. Single value factors should be selected with caution. NVS = nonvapor-suppressed resin. VS = vapor-suppressed resin.
[b]Factors are 30-70% of those for nonvapor-suppressed resins.
[c]Gel coat is not normally used in this process.
[d]Resin factors for the continuous lamination process are assumed to apply.
[e]Resin factors for the hand layup process are assumed to apply.
[f]Factors unavailable. However, when cast parts are subsequently sprayed with gel coat, hand and spray layup gel coat factors are assumed to apply.
[g]Resin factors for marble casting, a semiclosed process, are assumed to apply.

TABLE 4.12-3. TYPICAL RESIN STYRENE PERCENTAGES

Resin Application	Resin Styrene Content[a] (wgt. %)
Hand layup	43
Spray layup	43
Continuous lamination	40
Filament winding	40
Marble casting	32
Closed molding	35
Gel coat	35

[a]May vary by at least ±5 percentage points.

RE: P.D.&E.
air pollution permit application

ACHMENT II

ACTUAL EMISSIONS FOR 1988

EMISSIONS = (EMISSION RATE)(UTILIZATION RATE)(COMPONENT PERCENTAGE)

STRENE: RESIN (AME) (.06)(24.2 #/hr)(0.42) ← See Page A
RESIN (RCI) (.06)(81.1 #/hr)(0.50) ← See Page B
GEL COAT + (.30)(18.3 #/hr)(0.35) = 5.0 #/hr = 9.53 T/yr
See Page G ↑ ← See Page C

METHYL METHACRALATE:
GEL COAT (1.0)(18.3 #/hr)(0.05) ← See Page C = 0.92 #/hr = 1.76 T/yr
Assuming 100% Volatile

ACETONE: 100% Volatile → 217,403 #/yr (used) - 109,065 #/yr (recycled) ← See Page D
= 28.2 #/hr = 54.2 T/yr

1,1,1-TRICHLOROETHANE:
(1.0)(0.21 #/hr)(0.68) = .1428 #/hr = 0.27 T/yr
Assuming 100% Volatile → See Page E

TOLUENE: (1.0)(0.21 #/hr)(0.08) = .0168 #/hr = .032 T/yr

MISC: *** (1.0)(0.13 #/hr)(1.00) = 0.13 #/hr = 0.25 T/yr
← See Note Below

** ACTUAL EMISSIONS BASED ON NEW WEEKLY USE OF ACETONE WOULD BE:

(500 GAL/WK USED) - (225 GAL/WK RECYCLED) X (6.61 #/GAL) X (48 WKS/YR) =
87,252 #/yr = 15.1 #/hr = 43.6 T/yr

*** SEE NOTE ON PAGE 4 OF APPLICATION

Since there is such a large # of different paint types and components in the paints, we are assuming conservatively 100% Volatile components.
(All MSDS's are attached to permit application)

Ashland Chemical Company
DIVISION OF ASHLAND OIL, INC.
P. O. BOX 2219, COLUMBUS, OHIO 43216 • (614) 889-3333
24-HOUR EMERGENCY TELEPHONE (606) 329-1133

72-62-7820-01

MATERIAL SAFETY DATA SHEET

"A"

Ashland

000903

AME 4000 (B-0105) AROPOL

THIS MSDS COMPLIES WITH 29 CFR 1910.1200 (THE HAZARD COMMUNICATION STANDARD)

****

Product Name: AME 4000 (B-0105) AROPOL

Data Sheet No: 0208205-002
Prepared: 12/22/88
Supersedes: 06/17/88

SEA RAY BOATS INC
P O BOX 542655
MERRITT ISLAND FL 32952

03 56 021 7956600-

PRODUCT: 562669
INVOICE: 042385
INVOICE DATE: 01/18/89
TO: SEA RAY BOATS INC
PRODUCT DEVELOPMENT & ENGRG
200 SEA RAY DRIVE
[illegible]

ATTN: PLANT MGR./SAFETY DIR.

SECTION II - [illegible]

General or Generic ID: UNSATURATED POLYESTER RESIN

DOT Hazard Classification: FLAMMABLE LIQUID (173.115)

SECTION III - [illegible]

IF PRESENT, IARC, NTP AND OSHA CARCINOGENS AND CHEMICALS SUBJECT TO THE REPORTING REQUIREMENTS OF SARA TITLE III SECTION 313 ARE IDENTIFIED IN THIS SECTION. SEE DEFINITION PAGE FOR CLARIFICATION

INGREDIENT	% (by WT)	PEL	TLV	Note
POLYMER *	55-60			(1)
STYRENE CAS #: 100-42-5	42	100 PPM	50 PPM	(2)

Notes:

(1) PEL/TLV NOT ESTABLISHED FOR THIS MATERIAL

(2) ACGIH - SHORT TERM EXPOSURE LIMIT (STEL) FOR STYRENE MONOMER IS 100 PPM. THE OSHA ACCEPTABLE CEILING CONCENTRATION IS 200 PPM. THE ACCEPTABLE MAXIMUM PEAK ABOVE THE ACCEPTANCE CEILING CONCENTRATION FOR AN 8-HOUR SHIFT IS 600 PPM FOR A MAXIMUM DURATION OF 5 MINUTES IN ANY 3 HOURS. NIOSH RECOMMENDS A LIMIT OF 50 PPM, 8-HOUR TWA; 100 PPM 15 MINUTE CEILING.

THIS CHEMICAL IS SUBJECT TO THE REPORTING REQUIREMENTS OF SECTION 313 OF SARA TITLE III.

* THE SPECIFIC CHEMICAL NAME OF THIS COMPONENT IS BEING WITHHELD AS A TRADE SECRET.

SECTION IV - [illegible]

Boiling Point	for COMPONENT(42%)	293.40 Deg F (145.22 Deg C) @ 760.00 mm Hg
Vapor Pressure	for COMPONENT(42%)	5.00 mm Hg @ 68.00 Deg F (20.00 Deg C)
Specific Vapor Density	AIR = 1	3.6
Specific Gravity		1.046 - 1.070 @ 77.00 Deg F (25.00 Deg C)
Percent Volatiles		40-45%
Evaporation Rate		SLOWER THAN ETHER
Appearance		HAZY GREEN COLORED LIQUID
State		LIQUID
Form		HOMOG SOLN

SECTION V - [illegible]

FLASH POINT 73.0 - 100.0 Deg F (22.8 - 37.8 Deg C)

EXPLOSIVE LIMIT (LOWEST VALUE OF COMPONENT) LOWER - 1.1% UPPER - 6.1%

EXTINGUISHING MEDIA: REGULAR FOAM OR WATER FOG OR CARBON DIOXIDE OR DRY CHEMICAL

HAZARDOUS DECOMPOSITION PRODUCTS: MAY FORM TOXIC MATERIALS:, CARBON DIOXIDE AND CARBON MONOXIDE, VARIOUS HYDROCARBONS, ETC.

FIREFIGHTING PROCEDURES: WEAR SELF-CONTAINED BREATHING APPARATUS WITH A FULL FACEPIECE OPERATED IN THE POSITIVE PRESSURE DEMAND MODE WHEN FIGHTING FIRES.

SPECIAL FIRE & EXPLOSION HAZARDS: VAPORS ARE HEAVIER THAN AIR AND MAY TRAVEL ALONG THE GROUND OR MAY BE MOVED BY VENTILATION AND IGNITED BY PILOT LIGHTS, OTHER FLAMES, SPARKS, HEATERS, SMOKING, ELECTRIC MOTORS, STATIC DISCHARGE, OR OTHER IGNITION SOURCES AT LOCATIONS DISTANT FROM MATERIAL HANDLING POINT.

ALL FIVE GALLON PAILS AND LARGER METAL CONTAINERS INCLUDING TANK CARS AND TANK TRUCKS SHOULD BE GROUNDED AND/OR BONDED WHEN MATERIAL IS TRANSFERRED.

NEVER USE WELDING OR CUTTING TORCH ON OR NEAR DRUM (EVEN EMPTY) BECAUSE PRODUCT (EVEN JUST RESIDUE) CAN

CONTINUED ON PAGE: 2

REICHHOLD CHEMICALS, INC.
Reactive Polymers Division
8540 Baycenter Road
Jacksonville, Florida 32245

MATERIAL SAFETY DATA SHEET "B"

Information Telephone No. 904-739-2170

ALL CHEMICAL EMERGENCIES
1-800-424-9300

 ISSUE DATE: 01/30/87

SECTION I - PRODUCT IDENTIFICATION

Product Code : 33-250 Trade Name: Hydrex(TM) Polyester Resin
C.A.S. Number: Mixture Product Class: Unsaturated Polyester

SECTION II - HAZARDOUS INGREDIENTS

Ingredients	CAS #	Weight %	Exposure Limits
Styrene Monomer	100-42-5	40-50	50. ppm

SECTION III - PHYSICAL DATA

Boiling Point: 295 Deg. F. Vapor Density: Heavier than Air.
Evap. Rate: Slower than n-Butyl Acetate. Specific Grav: 1.1
Percent volatiles: < 50
Appearance: Purple Opaque liquid. Pungent odor.

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

Flammability Class: 1C Flash Point: 89 Deg. F. LEL : 1.1

-EXTINGUISHING MEDIA:

Water spray, foam, dry chemical, carbon dioxide or any Class B extinguishing agent.

-SPECIAL FIREFIGHTING PROCEDURES:

Firefighters and others exposed to vapors or products of combustion should wear self-contained breathing apparatus. Equipment should be thoroughly decontaminated after use.

-UNUSUAL FIRE & EXPLOSION HAZARDS:

At elevated temperatures, such as in a fire, polymerization may take place. If polymerization takes place in a closed container, there is the possibility of violent rupture of the container. Product vapors may form an explosive mixture in air.

SECTION V - HEALTH HAZARD DATA

-PERMISSIBLE EXPOSURE LEVEL:

OSHA Exposure limits for styrene (29 CFR 1910.1000 Z-2):
100 ppm 8-Hour Time Weighted Average (TWA).
200 ppm - 600 ppm allowable ceiling concentration during one 5-minute period in any 3 hours.

ACGIH Exposure limits for styrene:
50 ppm 8-Hour Time Weighted Average (TWA) (con't)

"C"

MATERIAL SAFETY DATA SHEET

SECTION I - MANUFACTURERS INFORMATION

UCT CODE IDENTITY: 944W969 300
: COOK PAINT AND VARNISH COMPANY
ESS: P.O. BOX 419389
KANSAS CITY, MO 64141-6389

PRODUCT NAME: SEA RAY WHITE
DATE OF MSDS: 03/28/88

EMERGENCY TELEPHONE: 816-391-6000
INFORMATION TELEPHONE: 816-391-6003

ATTN: SAFETY AND HEALTH OFFICER
SEA RAY BOAT-PDE
PO BOX 541257

MERRIT ISLAND FL 329541257

CUSTOMER NUMBER: 546039
DATE PRINTED: 04/25/88

SECTION II - HAZARDOUS INGREDIENTS

TYRENE MONOMER

CAS #: 100-42-5 PERCENT: 35.000 VAPOR PRESSURE: 4.5 (MMHG/DEG F)

EXPOSURE LIMIT:
ACGIH TLV/TWA: 50 PPM (SKIN) (215 MG/CU.M.)
ACGIH TLV/STEL: 100 PPM (SKIN) (425 MG/CU.M.)
OSHA PEL: 100 PPM (425 MG/CU.M.)
OSHA PEL/CEILING: 200 PPM (850 MG/CU.M.)
OTHER: OSHA: 600 PPM/5 MIN/3 HR PEAK

ITANIUM DIOXIDE
EE ACGIH TLV BOOKLET, APPENDIX D

CAS #: 13463-67-7 PERCENT: 15.000 VAPOR PRESSURE: N/A (MMHG/DEG F)

EXPOSURE LIMIT:
ACGIH TLV/TWA: 10MG/CU.M. AS DUST, 5MG/CU.M. AS FUMES
OSHA PEL: 15MG/CU.M.

LICA, AMORPHOUS

CAS #: 7631-86-9 PERCENT: LESS THAN 5 VAPOR PRESSURE: N/A (MMHG/DEG F)

EXPOSURE LIMIT:
ACGIH TLV/TWA: 10MG/CU.M. TOTAL DUST
OSHA PEL: 20M PPCF AS DUST

LC (HYDROUS MAGNESIUM SILICATE)

CAS #: 14807-96-6 PERCENT: 10.000 VAPOR PRESSURE: N/A (MMHG/DEG F)

EXPOSURE LIMIT:
ACGIH TLV/TWA: 2 MG/M3 RESPIRABLE DUST
OSHA PEL: 20 M PPCF

THYL METHACRYLATE

CAS #: 80-62-6 PERCENT: 5.000 VAPOR PRESSURE: 29.0 (MMHG/DEG F)

EXPOSURE LIMIT:
ACGIH TLV/TWA: 100 PPM (410 MG/CU.M.)
ACGIH TLV/STEL: 125 PPM (510 MG/CU.M.)
OSHA PEL: 100 PPM (410 MG/CU.M.)

MUM VOC NOT CONSUMED DURING CURING IS 40 GRAM/LITER (OR 230 GRAMS/SQUARE
I OF SURFACE AREA OPEN TO AIR). MAXIMUM VOC OF UNCATALYZED RESINS AND GEL
S IS 600 GRAMS/LITER.

72-62-7820-01

MATERIAL SAFETY DATA SHEET

Ashland Chemical Company
DIVISION OF ASHLAND OIL, INC.
P. O. BOX 2219, COLUMBUS, OHIO 43216 • (614) 889-3333
24-HOUR EMERGENCY TELEPHONE (606) 324-1133

003980

ACETONE

THIS MSDS COMPLIES WITH 29 CFR 1910.1200 (THE HAZARD COMMUNICATION STANDARD)

****

Product Name: ACETONE
CAS NUMBER: 67-64-1

05 50 093 7980090-

Data Sheet No: 0004338-004
Prepared: 12/22/88
Supersedes: 03/04/86

SEA-RAY BOATS INC
100 SEA RAY DR
MERRITT ISLAND FL 32952

PRODUCT: 3010000
INVOICE: 120472
INVOICE DATE: 02/21/89
TO: SEA-RAY BOATS INC
100 SEA RAY DR
MERRITT ISLAND FL 32952

ATTN: PLANT MGR./SAFETY DIR.

SECTION II - PRODUCT IDENTIFICATION

General or Generic ID: KETONE

DOT Hazard Classification: FLAMMABLE LIQUID (173.115)

SECTION III - COMPONENTS

IF PRESENT, IARC, NTP AND OSHA CARCINOGENS AND CHEMICALS SUBJECT TO THE REPORTING REQUIREMENTS OF SARA TITLE III SECTION 313 ARE IDENTIFIED IN THIS SECTION. SEE DEFINITION PAGE FOR CLARIFICATION

INGREDIENT	% (by WT)	PEL	TLV	Note
ACETONE CAS #: 67-64-1	100	1000 PPM	750 PPM	(1)

Notes:

(1) ACGIH - SHORT TERM EXPOSURE LIMIT (STEL) FOR ACETONE IS 1000 PPM. NIOSH RECOMMENDS A LIMIT OF 250 PPM, 8-HOUR TWA.

THIS CHEMICAL IS SUBJECT TO THE REPORTING REQUIREMENTS OF SECTION 313 OF SARA TITLE III.

SECTION IV - PHYSICAL DATA

Boiling Point	for PRODUCT	133.00 Deg F (56.11 Deg C) @ 760.00 mm Hg
Vapor Pressure	for PRODUCT	181.70 mm Hg @ 68.00 Deg F (20.00 Deg C)
Specific Vapor Density	AIR = 1	2.0
Specific Gravity		.785 - .788 @ 77.00 Deg F (25.00 Deg C)
Percent Volatiles		100.00%
Evaporation Rate	(N-BUTYL ACETATE = 1)	6.00

SECTION V - FIRE AND EXPLOSION INFORMATION

FLASH POINT(TCC) 0.0 Deg F (-17.8 Deg C)

EXPLOSIVE LIMIT (PRODUCT) LOWER - 2.6% UPPER - 12.8%

EXTINGUISHING MEDIA: ALCOHOL FOAM OR CARBON DIOXIDE OR DRY CHEMICAL

HAZARDOUS DECOMPOSITION PRODUCTS: MAY FORM TOXIC MATERIALS:, CARBON DIOXIDE AND CARBON MONOXIDE, VARIOUS HYDROCARBONS, ETC.

FIREFIGHTING PROCEDURES: WEAR SELF-CONTAINED BREATHING APPARATUS WITH A FULL FACEPIECE OPERATED IN THE POSITIVE PRESSURE DEMAND MODE WHEN FIGHTING FIRES.

SPECIAL FIRE & EXPLOSION HAZARDS: MATERIAL IS HIGHLY VOLATILE AND READILY GIVES OFF VAPORS WHICH MAY TRAVEL ALONG THE GROUND OR BE MOVED BY VENTILATION AND IGNITED BY PILOT LIGHTS, OTHER FLAMES, SPARKS, HEATERS, SMOKING, ELECTRIC MOTORS, STATIC DISCHARGE, OR OTHER IGNITION SOURCES AT LOCATIONS DISTANT FROM MATERIAL HANDLING POINT.

NEVER USE WELDING OR CUTTING TORCH ON OR NEAR DRUM (EVEN EMPTY) BECAUSE PRODUCT (EVEN JUST RESIDUE) CAN IGNITE EXPLOSIVELY.

ALL FIVE GALLON PAILS AND LARGER METAL CONTAINERS INCLUDING TANK CARS AND TANK TRUCKS SHOULD BE GROUNDED AND/OR BONDED WHEN MATERIAL IS TRANSFERRED.

NFPA CODES: HEALTH- 1 FLAMMABILITY- 3 REACTIVITY- 0

SECTION VI - HEALTH HAZARD DATA

PERMISSIBLE EXPOSURE LEVEL 1000 PPM

THRESHOLD LIMIT VALUE 750 PPM

SEE SECTION II

CONTINUED ON PAGE: 2

BEST AVAILABLE COPY

"E"

Safety Data Sheet

Used to comply with Hazard Communication Standard, 29 CFR 1910.1200. Standard must be consulted for specific requirements.

U.S. Department of Labor
Occupational Safety and Health Administration
(Non-Mandatory Form)
Form Approved
OMB No. 1218-0072

IDENTITY (As Used on Label and List)
Seabond 1010

Note: Blank spaces are not permitted. If any item is not applicable, or no information is available, the space must be marked to indicate that.

Section I

Manufacturer's Name Midwest General Corp.	Emergency Telephone Number (313) 881-2340
Address (Number, Street, City, State, and ZIP Code) 20630 Harper Avenue Harper Woods, Michigan 48225	Telephone Number for Information (313) 881-2340 Date Prepared October 13, 1987 Signature of Preparer (optional)

Section II — Hazardous Ingredients/Identity Information

Hazardous Components (Specific Chemical Identity; Common Name(s))	OSHA PEL	ACGIH TLV	Other Limits Recommended	% (optional)
1,1,1, TRI Chloroethane (Methyl Chloroform)	350ppm	350ppm		68%
Toluol (Toluene)	200ppm	100ppm		8%

Section III — Physical/Chemical Characteristics

Boiling Point	165°f	Specific Gravity (H_2O = 1)	1.26
Vapor Pressure (mm Hg.)	104	Melting Point	NA
Vapor Density (AIR = 1)	4,54	Evaporation Rate (Butyl Acetate = 1)	2.6

Solubility in Water
Nil

Appearance and Odor
Brown syrupy Liquid - Degreasing Fluid Odor

Section IV — Fire and Explosion Hazard Data

Flash Point (Method Used)	Flammable Limits	LEL	UEL
NONE	N/A	7%	15%

Extinguishing Media
Water, Dry Chemical or Carbon Dioxide

Special Fire Fighting Procedures
Fire Fighters should wear NIOSH/MSHA approved Self-contained breathing apparatus.

Unusual Fire and Explosion Hazards
Vapor Concentrated in a confined and poorly ventelated area can be ignited upon contact with a spark.

"F"

worker performed almost continuous spraying while standing on a portable platform that was inserted into the tank that also supported a large duct with high velocity airflow that exhausted vapors very close to the point of generation.

Two facilities, using a unique production process to ensure good secondary bonding between resin layers, also had the side effect of obtaining low ambient exposure levels from the process. After gelcoating and hand laminating the mold, the part was covered with plastic sheeting and a vacuum pulled while the part is curing. Covering the part and pulling a vacuum through the space between the part and the plastic, removes styrene vapor from the work place air and reduces employee exposure.

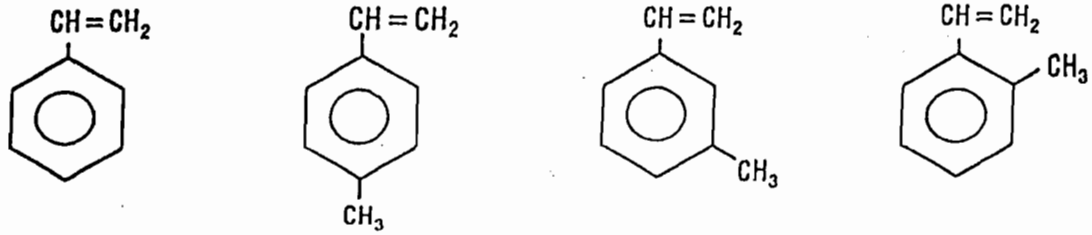
The majority of companies which installed some form of dilution ventilation, for example, filter banks on the walls that pull a large volume of air, were mostly ineffective. They were either too far from the source of the exposure or were defeated by lack of directionality and turbulence.

Substitution

NIOSH estimates that approximately 6% of styrene monomer in a 40/60 polyester resin mixture vaporizes during the curing process. Methyl styrene (also called vinyl toluene) is a close chemical cousin of styrene that has a lower vapor pressure, reducing the amount of vaporization. Methyl styrene has three isomers, para, meta, or the ortho form. Two production facilities were using a resin mixture containing 60% polyester, 14% styrene and 26% para-methyl styrene.

FIGURE V.3

Styrene and the Three Isomers of Methyl Styrene



STYRENE | Para methyl styrene | Meta methyl styrene | Ortho methyl styrene

"G" EXHIBIT "A" - PART 1

TABLE 4.12-2. EMISSION FACTORS FOR UNCONTROLLED POLYESTER RESIN PRODUCT FABRICATION PROCESSES[a]
(100 x mass of VOC emitted/mass of monomer input)

Process	Resin		Emission Factor Rating	Gel Coat		Emission Factor Rating
	NVS	VS[b]		NVS	VS[b]	
Hand layup	5 - 10	2 - 7	C	26 - 35	8 - 25	D
Spray layup	9 - 13	3 - 9	B	26 - 35	8 - 25	B
Continuous lamination	4 - 7	1 - 5	B	c	c	—
Pultrusion[d]	4 - 7	1 - 5	D	c	c	—
Filament winding[e]	5 - 10	2 - 7	D	c	c	—
Marble casting	1 - 3	1 - 2	B	f	f	—
Closed molding[g]	1 - 3	1 - 2	D	c	c	—

mid range = 30%

[a]Reference 9. Ranges represent the variability of processes and sensitivity of emissions to process parameters. Single value factors should be selected with caution. NVS = nonvapor-suppressed resin. VS = vapor-suppressed resin.
[b]Factors are 30-70% of those for nonvapor-suppressed resins.
[c]Gel coat is not normally used in this process.
[d]Resin factors for the continuous lamination process are assumed to apply.
[e]Resin factors for the hand layup process are assumed to apply.
[f]Factors unavailable. However, when cast parts are subsequently sprayed with gel coat, hand and spray layup gel coat factors are assumed to apply.
[g]Resin factors for marble casting, a semiclosed process, are assumed to apply.

TABLE 4.12-3. TYPICAL RESIN STYRENE PERCENTAGES

Resin Application	Resin Styrene Content[a] (wgt. %)
Hand layup	43
Spray layup	43
Continuous lamination	40
Filament winding	40
Marble casting	32
Closed molding	35
Gel coat	35

[a]May vary by at least ±5 percentage points.

CANTELOU ASSOCIATES
CONSULTING ENGINEERS
SURVEYORS & PLANNERS

file copy

RECEIVED
MAY 19 1989
DER BAQM

May 8, 1989

John Reynolds
Department of Environmental Regulation
Bureau of Air Quality Management
2600 Blairstone Road
Tallahassee, FL 32399

RE: Merritt Island Plant and P. D. & E. Facility

Dear Mr. Reynolds:

Please accept the attached check from Ray Industries, Inc. in the amount of $3,500.00. This represents payment of the application fee for air permits for the Merritt Island plant in the amount of $2,500.00 and the application fee for the Product Development and Engineering operation in the amount of $1,000.00.

Sea Ray Boats, Inc. by this letter, respectfully requests that the application for the Merritt Island Plant be modified to show acetone usage of 90.2 tons per year which will result in an emission of 46.6 tons per year and also request that the application for the Product Development & Engineering facility be modified to show acetone usage of 74.3 tons per year which will result in an emission of 38.6 tons per year.

Sea Ray is currently utilizing the non-volatile solvent REZ-AWAY and the reduction is based on the introduction of a new solvent D. B. E. (manufactured by DuPont, Co.) having a volatilization/evaporation rate much slower than water (technical data and discussion is attached). It is the goal of Sea Ray to continue reducing their use of acetone, and with the introduction of new products this may be achieved in the near future.

Thank you for your attention and assistance. If you have any questions or care to discuss, please call.

Yours truly,

G. E. Cantelou, Jr. P. E.

GEC:sc

Enclosures
copied: J. Reynolds
C. Collins

1359 Silver Bluff Rd. Suite B-3 / P.O. Box 3102 / Aiken, S.C. 29802 / (803) 648-9300

Per Sally McCoach, Dupont

90% Evaporation time measured using Shell evapometer, shows evaporation rate of:

Water	1,376
Acetone	82
DBE	56,700

Per phone conversation 5-3-89 Selina Cantelon
Cantelon Associates

Merritt Island

ATTACHMENT II

ACTUAL EMISSIONS (1988 USAGE)

EMISSIONS = (EMISSION RATE)(UTILIZATION RATE)(COMPONENT PERCENTAGE)

STRENE: RESIN (.06)(736.4 #/hr)(0.37)
GEL COAT + (.30)(125.7 #/hr)(0.30) = 27.7 #/hr = 53.1 T/yr

METHYL METHACRALATE:
GEL COAT (1.0)(125.7 #/hr)(0.05) = 6.3 #/hr = 12.1 T/yr

ACETONE: **
ACETONE 318,165 (TOTAL) - 97,068 (RECYCLED) =
221,097 # emitted/yr = 38.4 #/hr =110.6 T/yr

1,1,1-TRICHLOROETHANE:
(1.0)(2.52 #/hr)(0.60) = 1.51 #/hr = 2.9 T/yr

METHYLENE CHLORIDE: (1.0)(2.52 #/hr)(0.30) = 0.76 #/hr = 1.4 T/yr

AROMATIC HYDROCARBON:
(1.0)(21.95 #/hr)(.162) = 3.56 #/hr = 6.8 T/yr

XYLENE: (1.0)(21.95 #/hr)(0.63) = 1.38 #/hr = 2.7 T/yr

OK

** ACTUAL EMISSIONS BASED ON NEW WEEKLY USE OF ACETONE WOULD BE:

(600 GAL/WK (USED) - 275 GAL/WK (RECYCLED) X (6.61 #/GAL) X (48 WKS/YR) =
103,116 #/yr = 17.9 #/hr = 51.56 T/yr

Based on 24 hr day

26.85 lb/hr

$\frac{325 \times 6661}{5 \times 16}$ = 26.85 lb/hr

5760

24.29 lb/hr (16 hr day)

REDUCE TO 46.6 T/yr

ACHMENT II

P.D. & E.

ACTUAL EMISSIONS FOR 1988

EMISSIONS = (EMISSION RATE)(UTILIZATION RATE)(COMPONENT PERCENTAGE)

STRENE: RESIN (AME) (.06)(24.2 #/hr)(0.42)
RESIN (RCI) (.06)(81.1 #/hr)(0.50)
GEL COAT + (.30)(18.3 #/hr)(0.35) = 5.0 #/hr = 9.53 T/yr

METHYL METHACRALATE:
GEL COAT (1.0)(18.3 #/hr)(0.05) = 0.92 #/hr = 1.76 T/yr

ACETONE: 217,403 #/yr (used) - 109,065 #/yr (recycled) =
= 28.2 #/hr = 54.2 T/yr

1,1,1-TRICHLOROETHANE:
(1.0)(0.21 #/hr)(0.68) = .1428 #/hr = 0.27 T/yr

TOLUENE: (1.0)(0.21 #/hr)(0.08) = .0168 #/hr = .032 T/yr

MISC: *** (1.0)(0.13 #/hr)(1.00) = 0.13 #/hr = 0.25 T/yr

** ACTUAL EMISSIONS BASED ON NEW WEEKLY USE OF ACETONE WOULD BE:

(500 GAL/WK USED) - (225 GAL/WK RECYCLED) X (6.61 #/GAL) X (48 WKS/YR) =
87,252 #/yr = 15.1 #/hr = 43.6 T/yr

*** SEE NOTE ON PAGE 4 OF APPLICATION

20.1 lb/hr (16 hr day)

REDUCE TO 38.6 T/yr

MATERIAL SAFETY DATA SHEET

PRODUCT IDENTIFICATION

NAME : DBE
CHEMICAL FAMILY : Aliphatic Dibasic Acid Esters
TRADE NAMES AND SYNONYMS :
Dibasic Ester
DU PONT REGISTRY NO. : 53-60-5
FORMULA : CH3OOC(CH2)n-COOCH3, n=2,3 and 4
MOLECULAR WEIGHT : Ave. 160
MANUFACTURER/DISTRIBUTOR : E.I. du Pont de Nemours & Co., Inc.
1007 Market Street
Wilmington, DE 19898
PRODUCT INFORMATION PHONE : 1-800-441-7515
MEDICAL EMERGENCY PHONE : 1-800-441-3637
TRANSPORTATION EMERGENCY PHONE : CHEMTREC 1-800-424-9300

****

HAZARDOUS COMPONENTS

CHEMICAL	CAS NUMBER	%
Dimethyl Glutarate	1119-40-0	66
Dimethyl Adipate	627-93-0	17
Dimethyl Succinate	106-65-0	16.5
Methanol	67-56-1	~0.1
Hydrogen Cyanide	74-90-8	<10ppm

****

PHYSICAL DATA

Boiling Point : 196 to 225 deg C
Melting Point : ~ -20 deg C
Specific Gravity : 1.092 at 20 deg C
Vapor Pressure : 0.2 mm Hg at 20 deg C
Solubility in H20 : 5.3 wt % at 20 deg C
% Volatiles : 100 wt % at 20 deg C
Evaporation Rate : <.1 (Butyl Acetate = 1.0)
Odor : Sweet
Form : Liquid
Color : Colorless

****

HAZARDOUS REACTIVITY

INSTABILITY : Stable.
INCOMPATIBILITY : Incompatible with strong oxidants, acids, alkalies.
DECOMPOSITION : Decomposes with heat.
POLYMERIZATION : Polymerization will not occur.

FIRE AND EXPLOSION DATA

Flash Point : 100 deg C
Method : TCC
Autoignition Temperature : 370 deg C
Explosive Limits in Air, % by Vol. :
LEL : 0.9
UEL : 8.0

FIRE AND EXPLOSION HAZARDS
Vapor forms explosive mixture with air. Hazardous gases produced in fire are carbon monoxide.

EXTINGUISHING MEDIA
Water. Chemical Foam. Dry Chemical. CO2.

SPECIAL FIRE FIGHTING INSTRUCTIONS
Flood with water. Wear self-contained breathing apparatus. Wear full protective equipment (eye, body, respiratory).

****

HEALTH HAZARD INFORMATION

PRINCIPAL HEALTH HAZARDS

Inhalation LC50: 1 hr. >10.7 mg/l in rats
Skin absorption LD50: >2,250 mg/kg in rabbits
Oral LD50: 8,191 mg/kg in rats

DBE is an eye irritant in animal tests. DBE has also been found to be a moderate skin irritant in rabbits. DBE demonstrated no mutagenic activity when tested in bacterial cell cultures. DBE demonstrated no reproductive toxicity and was not uniquely toxic to the fetus in a developmental study. DBE produced mild nasal lesions in rats.

Anticipated human health effects of overexposure include eye and skin irritation.

CARCINOGENICITY
NONE OF THE COMPONENT(S) OF THIS MATERIAL IS LISTED AS A CARCINOGEN BY NTP, IARC, OR OSHA.

EXPOSURE LIMITS
AEL (Du Pont) : 10mg/M3 (8 hr TWA)
TLV * (ACGIH) : None Established
PEL (OSHA) : None Established
* TLV is a registered trademark.

Methanol: AEL: 200ppm, 8hr TWA, skin; 100ppm, 12hr TWA, skin
TLV*: 200ppm, 8hr TWA, skin; 250ppm STEL; PEL: 200ppm
Hydrogen Cyanide: TLV* 10ppm C, skin

SAFETY PRECAUTIONS
Avoid breathing vapors or mist. Avoid contact with eyes. Wash thoroughl after handling.

FIRST AID

INHALATION :
If inhaled, remove to fresh air. If not breathing, give artificial respiration, preferably mouth-to-mouth. If breathing is difficult, give oxygen. Call a physician.

SKIN CONTACT :
Flush skin with water.

EYE CONTACT :
In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Call a physician.

INGESTION :
If swallowed, do not induce vomiting. Give large quantities of water. Never give anything by mouth to an unconscious person. Call a physician

****

PROTECTION INFORMATION

GENERALLY APPLICABLE CONTROL MEASURES and PRECAUTIONS
Use only with adequate ventilation. Do not mix with strong oxidants, acids, alkalies. Do not consume food, drink or tobacco in areas where they may become contaminated with this material.

PERSONAL PROTECTIVE EQUIPMENT
Coverall chemical splash goggles. Use when splash is likely. Air supplied respirator. Chemical Cartridge Respirator : Half-mask organic vapor cartridge. Full-face organic vapor cartridge if eye protection needed. Impervious gloves such as Neoprene.

****

AQUATIC TOXICITY : 96 hr, fathead minnows, LC50: >18ppm <24ppm

SPILL, LEAK, OR RELEASE
Review FIRE AND EXPLOSION HAZARDS and SAFETY PRECAUTIONS before proceeding with clean up. Use appropriate PERSONAL PROTECTIVE EQUIPMENT during clean up.

Remove source of heat, sparks, flame, impact, friction or electricity. Dike spill. Prevent liquid from entering sewers, water ways or low areas Recover free liquid for reuse or reclamation. Recover undamaged and minimally contaminated material for reuse or reclamation. Soak up with sawdust, sand, oil dry or other absorbent material.

WASTE DISPOSAL

Treatment, storage, transportation and disposal must be in accordance with EPA or State regulations under the authority of the Resource Conservation and Recovery Act (40 CFR, parts 260-271). Recover nonusable free liquid and dispose of in an approved and permitted incinerator. Recover contaminated water and dispose of in an approved and permitted biological treatment system or an approved and permitted deepwell. Remove nonusable solid material and/or contaminated soil, for disposal in an approved and permitted landfill. Do not flush to surface water or sanitary sewer system.

****

SHIPPING INFORMATION

DOMESTIC OTHER THAN AIR (DOT)
Shipping Name : DIBASIC ESTER MIXTURE
Hazard Class : Not Regulated
Freight Class : Plasticizers + Solvents

INTERNATIONAL WATER OR AIR (IMO/ICAO)
Shipping Name : DIBASIC ESTER MIXTURE
Hazard Class : Not Regulated

BULK WATER (USCG)
Shipping Name : DIBASIC ESTER MIXTURE

OTHER SHIPPING INFORMATION
Shipping Containers :
Tank Car : 170,000 lbs
Tank Truck : 42,000 lbs
Steel Drums : 485 lbs

****

STORAGE CONDITIONS

Store in well ventilated area. Keep container tightly closed. Do not store with strong oxidants, acids, alkalies.

****

ADDITIONAL INFORMATION AND REFERENCES

The hydrogen cyanide concentration in DBE is so low as to be toxicologically insignificant when DBE is used as a solvent. However, when reacting DBE with an alcohol and subsequent recovery of methanol, concentration of highly volatile impurities to toxicologically significant levels can occur in the light ends when methanol is topped in order to purify the methanol for reuse. Processors should be aware of this potential hazard.

****

Date of latest Revision : 08-Apr-87
Person Responsible for MSDS : Petrochemicals - Env. Affairs
Address : E.I. du Pont de Nemours & Co.,Inc.
Wilmington, DE 19898
Telephone : 302-774-5810

State of Florida
DEPARTMENT OF ENVIRONMENTAL REGULATION

For Routing To Other Than The Addressee

To: _____ Location: _____
To: _____ Location: _____
To: _____ Location: _____
From: _____ Date: _____

Interoffice Memorandum

TO: Dale Twachtmann

FROM: Steve Smallwood

DATE: December 4, 1989

SUBJ: Amendments to Construction Permits Nos. AC 05-151435, AC 05-165270, and AC 05-165271 (Sea Ray Boats, Inc.)

Attached for your approval and signature is a letter extending the expiration dates for the above referenced construction permits.

The Bureau recommends approval of these amendments.

Attachment

SS/JR/plm

Florida Department of Environmental Regulation

Twin Towers Office Bldg. ● 2600 Blair Stone Road ● Tallahassee, Florida 32399-2400

Bob Martinez, Governor | Dale Twachtmann, Secretary | John Shearer, Assistant Secretary

December 12, 1989

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. John A. Cronkhite
Senior Vice President/General Counsel
Sea Ray Boats, Inc.
2600 Sea Ray Boulevard
Knoxville, Tennessee 37914

Dear Mr. Cronkhite:

The Department received your request for an extension of the expiration dates for the construction permits referenced below. The request is acceptable and the following shall be changed:

PROJECT	FROM	TO
AC 05-151435	August 31, 1989	May 31, 1990
AC 05-165270	March 31, 1990	September 30, 1990
AC 05-165271	March 31, 1990	September 30, 1990

Attachment to be Incorporated:

Letter from Sea Ray Boats, Inc. dated November 22, 1989, requesting a change in the expiration dates.

A copy of this letter must be attached to the above construction permits and shall become a part of these permits.

Sincerely,

Dale Twachtmann

Dale Twachtmann
Secretary

DT/plm

cc: C. Collins, CF District
G. E. Cantelou, Jr., P.E.

SEA RAY BOATS, INC.
WORLD HEADQUARTERS, 2600 SEA RAY BLVD., KNOXVILLE, TENNESSEE 37914 (615) 522-4181

November 22, 1989

RECEIVED
NOV 28 1989
DER-BAQM

Mr. Clair Fancy
Chief Bureau of Air Regulation
Florida Department of Environmental Regulation
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Dear Mr. Fancy:

Please be advised that Sea Ray Boats has experienced unforeseen production reductions due to the recent economic and business cycle. Two plants in Tennessee and another in South Carolina have been closed.

Our facilities in Merritt Island have also been undergoing a restructuring of personnel and new product line.

Due to these recent business adjustments we have been unable to complete the permitting process as required.

Sea Ray Boats hereby requests that your department grant a 180 day extension of our construction permits numbered AC05-165270, AC05-165271 and AC05-151435.

This extension will give us the time needed to complete the process.

Thank you for your assistance in this matter.

Very truly yours,

SEA RAY BOATS, INC.

John A. Cronkhite

John A. Cronkhite
Senior Vice President/
General Counsel

JAC:lr
cc: T. Reynolds
C. Collins
CHF/BT

State of Florida
DEPARTMENT OF ENVIRONMENTAL REGULATION

Interoffice Memorandum

FOR ROUTING TO OTHER THAN THE ADDRESSEE

To: _____ Locin: _____
To: _____ Locin: _____
To: _____ Locin: _____
From: _____ Date: _____

CENTRAL DISTRICT

OCD-AP-89-0658

TO: Clair H. Fancy, Deputy Chief, CAPS

THROUGH: A. Alexander, Deputy Assistant Secretary

FROM: Charles M. Collins, Air Program Administrator CMC

DATE: October 25, 1989

SUBJECT: Air Modeling Results - Sea Ray Boats

We are in receipt of your September 6, 1989 memo and wish to comment on a few items:

1. Bill Blommel has informed me that on our Ozone Monitors, the recognition pattern for styrene and ozone are identical. This could mean excess concentration of styrene could be recorded as ozone and possibly result in a county being declared non-attainment with the resulting expense to taxpayers and industry.

   We have two ozone monitoring sites in Brevard County, the nearest one is approximately eight miles from Sea Ray Boats.

2. We feel any modeling results that show a violation of the AAL should be grounds for permit denial, or we feel a maximum of 16 hours of production should be a permit condition, otherwise we will not achieve the consistency in permitting that we are constantly told to strive for. This would put DER and our permitting engineers in a better position should any legal action take place claiming illness or injury from the concentration. Why go through the permitting exercise if we don't add control at this point.

   Emission limits based on 16 hr operation.

3. Caroline Shine informs me that we are receiving complaints stating very strong odors present near Sea Ray. (see attached)

4. We note that Macho Products is strongly considered by CAPS for pollution control. Their VOC contribution is 206 TPY without violating the AAL. Sea Ray's contribution is 234 TPY and does violate the AAL for 24 hours and is not controlled.

Impractical to hood an entire boat. Macho's hooding was practical.

5. What location is the "point of your concern" in Shao-Hang Chu's memo of 8-25-89. We take the maximum ground level concentration when it occurs as land could be sold at a later date.

6. We feel the ozone/styrene situation, the odor situation and the possible 24-hour operation may lead us to consider control.

These comments are not intended as criticism, but just an offer to open communication and find out what we all can be doing better to be No. 1. Let's discuss.

CMC:j

cc: Alan Zahm
Caroline Shine

TELEPHONE COMPLAINTS
NO. 120

☐ EMERGENCY RESPONSE

☐ FISH KILL
☐ WATER POLLUTION (General)
☐ AIR
☐ SOLID WASTE
☐ INDUSTRIAL WASTE
☐ HAZARDOUS WASTE
☐ DRINKING WATER
☐ DOMESTIC WASTE
☐ DREDGE/FILL/STORMWATER
☐ DW/COLLECTION SYSTEM
☐ PETROLEUM SPILL/LEAK
☐ MW/DISTRIBUTION SYSTEM

COUNTY: Brevard DATE: 10/10/89 TIME: 12:00 pm

NAME & ADDRESS OF SITE: Searay Boats Merritt Island

NATURE & DESCRIPTION OF COMPLIANT: solvent odor - strong

LENGTH OF PROBLEM:

COMPLAINANT: Kay M. Yeuell

ADDRESS/TEL: 3319 Maguire

TELEPHONE: 894-7555 218

PERSON RECEIVING COMPLAINT:

PERSON/AGENCY COMPLAINT ASSIGNED TO: C. Shine

10/12/89 Ride by for odor detection. Some odors observed off the property, but not overwhelming at that time. Shine rode on site also. Down wind was toward canal behind the site. Complainant advised that he was on canal when he observed odors.

Revised 8/29/88

TELEPHONE COMPLAINTS

NO. 113

Rec 9/26/89

☐ EMERGENCY RESPONSE

☐ FISH KILL	☐ DRINKING WATER
☐ WATER POLLUTION (General)	☐ DOMESTIC WASTE
☒ AIR	☐ DREDGE/FILL/STORMWATER
☐ SOLID WASTE	☐ DW/COLLECTION SYSTEM
☐ INDUSTRIAL WASTE	☐ PETROLEUM SPILL/LEAK
☐ HAZARDOUS WASTE	☐ MW/DISTRIBUTION SYSTEM

COUNTY: BREVARD DATE: 9/25/89 TIME: 0900 - 0930

NAME & ADDRESS OF SITE: SEA RAY BOAT CO. MERRITT ISLAND off SR 528

NATURE & DESCRIPTION OF COMPLIANT: STRONG ODOR of SOLVENTS ON BARGE CANAL to the NORTH within IMMEDIATE Vicinity of PLANT. ODOR ALMOST OVER WHELMING!

LENGTH OF PROBLEM:

COMPLAINANT: KAY M. YEUELL

ADDRESS/TEL: 3319 MAGUIRE ORLANDO 894-7555 x218

TELEPHONE PERSON RECEIVING COMPLAINT:

PERSON/AGENCY COMPLAINT ASSIGNED TO: Russ Sanborn, Compliance Eng.

2nd Notice
12:00 pm 10/10/89
Kay Yeu

Revised 8/29/88

TELEPHONE COMPLAINTS
NO. A94

☐ EMERGENCY RESPONSE

☐ FISH KILL	☐ DRINKING WATER
☐ WATER POLLUTION (General)	☐ DOMESTIC WASTE
☒ AIR	☐ DREDGE/FILL/STORMWATER
☐ SOLID WASTE	☐ DW/COLLECTION SYSTEM
☐ INDUSTRIAL WASTE	☐ PETROLEUM SPILL/LEAK
☐ HAZARDOUS WASTE	☐ MW/DISTRIBUTION SYSTEM

COUNTY: Brevard DATE: 8/2/89 TIME: 9:02 A

NAME & ADDRESS OF SITE: Sea Ray Boats
North side of Bee Line, Courtney Pkwy, M.I

NATURE & DESCRIPTION OF COMPLIANT: Strong smell of resin, especially between 7-9 Am

LENGTH OF PROBLEM: 6 weeks or more

COMPLAINANT: Lida Carter

ADDRESS/TEL: Brevard Co. Consumer Assn

TELEPHONE: SC 367-1510

PERSON RECEIVING COMPLAINT: Dina Jones

PERSON/AGENCY COMPLAINT ASSIGNED TO: C. Shine / P. Sanabani 8/4/89

Revised 8/29/88

Technical Evaluation
and
Preliminary Determination

Sea Ray Boats, Inc.
Brevard County
Merritt Island, Florida

Fiberglass Boat Plant and Development Facility
Permit Numbers:
AC 05-165270
AC 05-165271

Florida Department of Environmental Regulation
Division of Air Resources Managment
Bureau of Air Quality Management
Central Air Permitting

July 6, 1989

I. Application Information

A. Applicant

Sea Ray Boats, Inc.
Sea Ray Drive
Merritt Island, Florida 32953

B. Request

The Department received applications on May 19, 1989, for permits to construct a fiberglass boat plant and development facility at the applicant's site in Merritt Island, Florida. The applications ~~was~~ were deemed complete on June 16, 1989.

C. Location/Classification

The applicant's boat plant and development facility (SIC Code 3732) is located off State Road 3 near the Canaveral Port Authority in Merritt Island. Latitude and longitude of the boat plant are 28°24'32" N and 80°42'23"W, respectively, while the latitude and longitude of the development facility are 28°24'22"N and 80°42'08"W, respectively.

II. Project Description/Emissions

Fiberglass pleasure boats are manufactured by the applicant using an airless mold injection method. Laminations of resin and fiberglass are applied over gel coat before the wooden and foam structural parts are installed. After lamination the boats are extracted from their molds and trimmed of excess material. Upholstered parts are then prepared and used in the final assembly along with parts manufactured elsewhere.

Fiberglass boat manufacturing generates particulate emissions (sawdust from wood working and fiberglass from grinding), ~~as well as hydrocarbon (VOC) emissions from the molding operation.~~ A new high efficiency dust collection system is being installed in the boat plant to replace existing dust control equipment. It will recover essentially all of the particulate emitted. ~~The VOC emissions from the boat plant and development facility, totaling 176 tons per year, are impractical to collect and treat due to the large volume of air that must be vented by exhaust fans.~~

III. Rule Applicability

The construction permit applications are subject to review under Chapter 403, Florida Statutes, and Florida Administrative code (F.A.C.) Rules 17-2 and 17-4. The facility is located in an

area classified as attainment for regulated air pollutants. Since the boat plant and development facility are classified as minor (total emissions less than 250 TPY), they are not subject to the new source review requirements of Rule 17-2.500. Applicable rules are (1) F.A.C. Rule 17-2.520, Sources Not Subject to Prevention of Significant Deterioration or Nonattainment Requirements; (2) F.A.C. Rule 17-2.610, General Particulate Emission Limiting Standards; and (3) F.A.C. Rule 17-2.620, General Pollutant Emission Limiting Standards.

IV. Conclusion

Based on the information provided by Sea Ray Boats, Inc., the Department has reasonable assurance that the boat plant and development facility, as specified herein, will not cause or contribute to a violation of an ambient air quality standard, PSD increment, or any other technical provisions of Chapter 17-2 of the Florida Administrative Code.

area classified as attainment for regulated air pollutants. Since the boat plant and development facility are classified as minor (total emissions less than 250 TPY), they are not subject to the new source review requirements of Rule 17-2.500. Applicable rules are (1) F.A.C. Rule 17-2.520, Sources Not Subject to Prevention of Significant Deterioration or Nonattainment Requirements; (2) F.A.C. Rule 17-2.610, General Particulate Emission Limiting Standards; and (3) F.A.C. Rule 17-2.620, General Pollutant Emission Limiting Standards.

IV. Conclusion

Based on the information provided by Sea Ray Boats, Inc., the Department has reasonable assurance that the boat plant and development facility, as specified herein, will not cause or contribute to a violation of an ambient air quality standard, PSD increment, or any other technical provisions of Chapter 17-2 of the Florida Administrative Code.

SPECIFIC CONDITIONS:

4. Hydrocarbon emissions (VOC) shall not exceed the following calculated values and total VOC emissions from the facility shall not exceed 26.2 lbs/hr, 420 lbs/day (30 day average), and 50.5 tons/year. Compliance shall be demonstrated by applying the following raw material utilization rates and emission factors:

	Utilization Rate lbs/hr	Emission Factor	Emissions lbs/hr
Styrene (Resin-AME)	10.2	0.06	0.6
Styrene (Resin-RCI)	40.8	0.06	2.5
Styrene (Gel coat)	6.4	0.30	1.9
Methyl Methacrylate	18.3	0.05	0.9
1,1,1-Trichloroethane	0.2	0.68	0.1
Acetone	20.1	1.00	20.1
Toluene	0.2	0.08	0.02
Misc.	0.1	1.00	0.1

5. Nonvolatile acetone substitutes shall be used to the maximum extent practicable to further reduce the quantity of acetone consumed.

6. No air pollutants shall be discharged which cause or contribute to an objectionable odor (F.A.C. Rule 17-2.620(2)).

7. VOC Compliance shall be demonstrated over a 90-day period and the results reported to the Department's Central District office before this construction permit expires. The Department shall be notified at least 15 days in advance of the commencement of the 90 day compliance demonstration period.

8. The dust collector compliance test shall be conducted within 90 days after this permit is issued and the results reported to the Department's Central District office before this construction permit expires. The Department shall be notified at least 15 days in advance of the test.

9. The permittee, for good cause, may request that this construction permit be extended. Such a request shall be submitted to the BAQM prior to 60 days before the expiration of the permit (F.A.C. Rule 17-4.090).

10. An application for an operation permit must be submitted to the Central District office at least 90 days prior to the expiration date of this construction permit or within 45 days after completion of compliance testing, whichever occurs first. To properly apply for an operation permit, the applicant shall submit the appropriate application form, fee, certification that construction was completed noting any deviations from the conditions in the construction permit, and compliance test reports as required by this permit (F.A.C. 17-4.220).

PERMITTEE:
Sea Ray Boats

Permit No. AC 05-165271
Expiration Date: March 31, 1990

Issued this _____ day
of _____, 1989

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL REGULATION

_____
Dale Twachtmann, Secretary

SPECIFIC CONDITIONS:

4. Hydrocarbon emissions (VOC) shall not exceed the following calculated values and total VOC emissions from the facility shall not exceed 65.5 lbs/hr, 1048 lbs/day (30 day average), and 125.8 tons/year. Compliance shall be demonstrated by applying the following raw material utilization rates and emission factors:

	Utilization Rate lbs/hr	Emission Factor	Emissions lbs/hr
Styrene (Resin)	272.5	0.06	16.4
Styrene (Gel Coat)	37.7	0.30	11.3
Methyl Methacrylate	125.7	0.05	6.3
Methylene Chloride	2.5	0.30	0.8
Aromatic Hydrocarbon	21.9	0.16	3.5
1,1,1-Trichloroethane	2.5	0.60	1.5
Acetone	24.4	1.00	24.4
Xylene	21.9	0.06	1.3

5. Nonvolatile acetone substitutes shall be used to the maximum extent practicable to further reduce the quantity of acetone consumed.

6. No air pollutants shall be discharged which cause or contribute to an objectionable odor (F.A.C. Rule 17-2.620(2)).

7. The dust collector compliance test shall be conducted within 90 days after this permit is issued and the results reported to the Department's Central District office before this construction permit expires. The Department shall be notified at least 15 days in advance of the test.

8. VOC compliance shall be demonstrated over a 90-day period and the results reported to the Department's Central District office before this construction permit expires. The Department shall be notified at least 15 days in advance of the commencement of the 90-day compliance demonstration period.

9. The permittee, for good cause, may request that this construction permit be extended. Such a request shall be submitted to the BAQM prior to 60 days before the expiration of the permit (F.A.C. 17-4.090).

PERMITTEE:
Sea Ray Boats

Permit No. AC 05-165270
Expiration Date: March 31, 1990

SPECIFIC CONDITIONS:

10. An application for an operation permit must be submitted to the Central District office at least 90 days prior to the expiration date of this construction permit or within 45 days after completion of compliance testing, whichever occurs first. To properly apply for an operation permit, the applicant shall submit the appropriate application form, fee, certification that construction was completed noting any deviations from the conditions in the construction permit, and compliance test reports as required by this permit (F.A.C. 17-4.220).

Issued this _____ day
of _____, 1989

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL REGULATION

_____
Dale Twachtmann, Secretary

SEA RAY BOATS, INC.
100 Sea Ray Drive, Merritt Island, Florida 32953 (407) 452-6710

August 11, 1989

Mr. Bill Thomas
Bureau of Air Quality Management
Florida Department of Environmental Regulation
Twin Towers Office Bldg.
2600 Blair Stone Road
Tallahassee, FL 32399-2400

Dear Mr. Thomas:

Enclosed you will find the published "NOTICE OF INTENT TO ISSUE" which was placed in the local "TODAY" newspaper per the departments requirements as a condition prior to receiving the permits. If you have any questions, please feel free to contact me.

Sincerely,

SEA RAY BOATS, INC.

Robert A. Boone
Operations Manager

RAB/ln

Enclosures

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

cc: J. Reynolds
B. Mitchell
C. Collins

CAPE PUBLICATIONS, INC.

The Times
Published Weekly on Wednesday

THE TRIBUNE
Published Weekly on Wednesday

FLORIDA TODAY
Published Daily

STATE OF FLORIDA
COUNTY OF BREVARD

Before the undersigned authority personally appeared **Linda L. Spicer** who on oath says that he/she is **Legal Advertising Clerk** of the **FLORIDA TODAY**, a newspaper published in Brevard County, Florida; that the attached copy of advertising being a

Legal Notice

in the matter of

permits to Sea Ray Boats, Inc.

in the Court

was published in the **FLORIDA TODAY NEWSPAPER**
in the issues of July 28, 1989

Affiant further says that the said **FLORIDA TODAY NEWSPAPER** is a newspaper published in said Brevard County, Florida and that the said newspaper has heretofore been continuously published in said Brevard County, Florida regularly as stated above, and has been entered as second class mail matter at the post office in **COCOA**, said Brevard County, Florida for a period of one year next preceeding the first publication of the attached copy of advertisement; and affiant further says that he has neither paid nor promised any person, firm or corporation any discount, rebate, commission or refund for the purpose of securing this advertisement for publication in said newspaper.

Linda L. Spicer

Sworn and subscribed to before me this 28th day of July A.D., 19 89

Notary Public
State of Florida at Large
My Commission Expires March 29, 1992

RECEIVED
AUG 14 1989
DER - BAQM

State of Florida
Department of Environmental Regulation
Notice of Intent To Issue

The Department of Environmental Regulation hereby gives notice of its intent to issue permits to Sea Ray Boats, Inc. for after-the-fact construction of a fiberglass boat building plant and development facility in Merritt Island, Florida. A determination of Best Available Control Technology (BACT) was not required. The Department is issuing this intent to issue for the reasons stated in the Technical Evaluation and Preliminary Determination.

A person whose substantial interests are affected by the Department's proposed permitting decision may petition for an administrative proceeding (hearing) in accordance with Section 120.57, Florida Statutes. The petition must contain the information set forth below and must be filed (received) in the Office of General Counsel of the Department at 2600 Blair Stone Road, Tallahassee, Florida 32399-2400, within fourteen (14) days of publication of this notice. Petitioner shall mail a copy of the petition to the applicant at the address indicated above at the time of filing. Failure to file a petition within this time period shall constitute a waiver of any right such person may have to request an administrative determination (hearing) under Section 120.57, Florida Statutes.

The petition shall contain the following information: (a) The name, address, and telephone number of each petitioner, the applicant's name and address, the Department Permit File Number and the county in which the project is proposed; (b) A statement of how and when each petitioner received notice of the Department's action or proposed action; (c) A statement of how each petitioner's substantial interests are affected by the Department's action or proposed action; (d) A statement of the material facts disputed by Petitioner, if any; (e) A statement of facts which petitioner contends warrant reversal or modification of the Department's action or proposed action; (f) A statement of which rules or statutes petitioner contends require reversal or modification of the Department's action or proposed action; and (g) A statement of the relief sought by petitioner, stating precisely the action petitioner wants the Department to take with respect to the Department's action or proposed action.

If a petition is filed, the administrative hearing process is designed to formulate agency action. Accordingly, the Department's final action may be different from the position taken by it in this Notice. Persons whose substantial interests will be affected by any decision of the Department with regard to the applications have the right to petition to become a party to the proceeding. The petition must conform to the requirements specified above and be filed (received) within 14 days of publication of this notice in the Office of General Counsel at the above address of the Department. Failure to petition within the allowed time frame constitutes a waiver of any right such person has to request a hearing under Section 120.57, F.S., and to participate as a party to this proceeding. Any subsequent intervention will only be at the approval of the presiding officer upon motion filed pursuant to Rule 28-5.207, F.A.C.

The applications are available for public inspection during normal business hours, 8:00 a.m. to 5:00 p.m., Monday through Friday, except legal holidays, at: Department of Environmental Regulation
Bureau of Air Quality Management
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

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

Any person may send written comments on the proposed action to Mr. Bill Thomas at the Department's Tallahassee address. All comments mailed within 14 days of the publication of this notice will be considered in the Department's final determination.

TO098032-1T-7/28/1989, Friday

State of Florida
DEPARTMENT OF ENVIRONMENTAL REGULATION

INTEROFFICE MEMORANDUM

For Routing To District Offices And/Or To Other Than The Addressee		
To: _____	Locn.: _____	
To: _____	Locn.: _____	
To: _____	Locn.: _____	
From: _____	Date: _____	
Reply Optional [ ]	Reply Required [ ]	Info. Only [ ]
Date Due: _____	Date Due: _____	

CENTRAL DISTRICT

OCD-AP-89-0494

TO: John Glunn

THROUGH: A. Alexander

FROM: Charles M. Collins CMC

DATE: June 9, 1989

SUBJECT: BREVARD CO - SEA RAY BOAT, AMBIENT AIR IMPACT

We are currently taking enforcement action against Sea Ray Boat Company, Brevard County for operating air pollution sources without permits.

The company operates two boating operations at one facility with total VOC actual emissions of 185.6 tons/year and total VOC potential emissions of 313.64 tons/year. In addition, Sea Ray operates another permitted boating operation 60 feet from the unpermitted facility with actual emissions of 95.6 tons/year.

The company has submitted the applications for permits to CAPS. Please run air models of the three operations combined, and advise if source is in compliance with current ambient air ground level concentration standards.

REVISED EMISSION ESTIMATES:

OLD PLANT - 125.6 TPY VOC

NEW PLANT - 57.5 " "

DEV. FACILITY - 50.5 " "

233.6 " "

CANTELOU ASSOCIATES
CONSULTING ENGINEERS
SURVEYORS & PLANNERS

April 25, 1989

John Reynolds
DER
2600 Blairstone Road
Tallahasse, FL 32399

Dear Mr. Reynolds:

Per our conversion on April 25, 1989, enclosed are the emission calculation sheets from the Merritt Island and P. D. & E. air pollution permit applications. Attached to the calculations are the basis for the numbers we used. I hope this clarifies the calculations.

If you have any questions or need any additional information, please feel free to call.

Yours truly,

G. E. Cantelou, Jr. P. E.

GEC:sc

Enclosures

1359 Silver Bluff Rd. Suite B-3 / P.O. Box 3102 / Aiken, S.C. 29802 / (803) 648-9300

CANTELOU ASSOCIATES
CONSULTING ENGINEERS
SURVEYORS & PLANNERS

April 18, 1989

Mr. Bill Thomas
Department of Environmental Regulation
2600 Blairston Road
Twin Towers Suite 306
Tallahassee, FL

Dear Mr. Thomas:

Transmitted herewith are air permit applications for the Merritt Island Sea Ray facility and the Product Development and Engineering Sea Ray facility for your review and approval.

If you have any questions, please feel free to call at (803) 648-9300.

Yours truly,

G. E. Cantelou, Jr. P. E.

GEC:sc

Enclosures

1359 Silver Bluff Rd. Suite B-3 / P.O. Box 3102 / Aiken, S.C. 29802 / (803) 648-9300

John Reynolds

CANTELOU ASSOCIATES
CONSULTING ENGINEERS
SURVEYORS & PLANNERS

RECEIVED
JUN 30 1989
DER - BAQM

June 27, 1989

John Reynolds
Department of Environmental Regulation
2600 Blairstone Road
Tallahassee, FL 32399

RE: P. D. & E. Air Pollution Permit Application

Dear Mr. Reynolds:

Enclosed is information on the dust collector at the above referenced plant. The daily usage of wood is 10 sheets of plywood, 8 2"X12" fir boards, and 16 2"X16" fir boards.

If you have any questions, please feel free to call.

Yours truly,

G. E. Cantelou, Jr. P. E.

GEC:sc

Enclosures

1359 Silver Bluff Rd. Suite B-3 / P.O. Box 3102 / Aiken, S.C. 29802 / (803) 648-9300

from the desk of... MELANIE L. THOMPSON

date: 6-23-89

Hi Salina,

Attached is information on our Wood Dust Collector and I have listed below information that you requested:

CFPM - 4000 to 5600

Capacity - 8.5 Cubic Feet

Efficiency - 99%

If you have any questions, please feel free to contact me.

Thank you.

Melanie

REQUESTED REPLY

jan.	feb.	mar.	apr.	1	2	3	4	5	6	7	8	9	10	11
may	june	july	aug.	12	13	14	15	16	17	18	19	20	21	22
sept.	oct.	nov.	dec.	23	24	25	26	27	28	29	30	31		

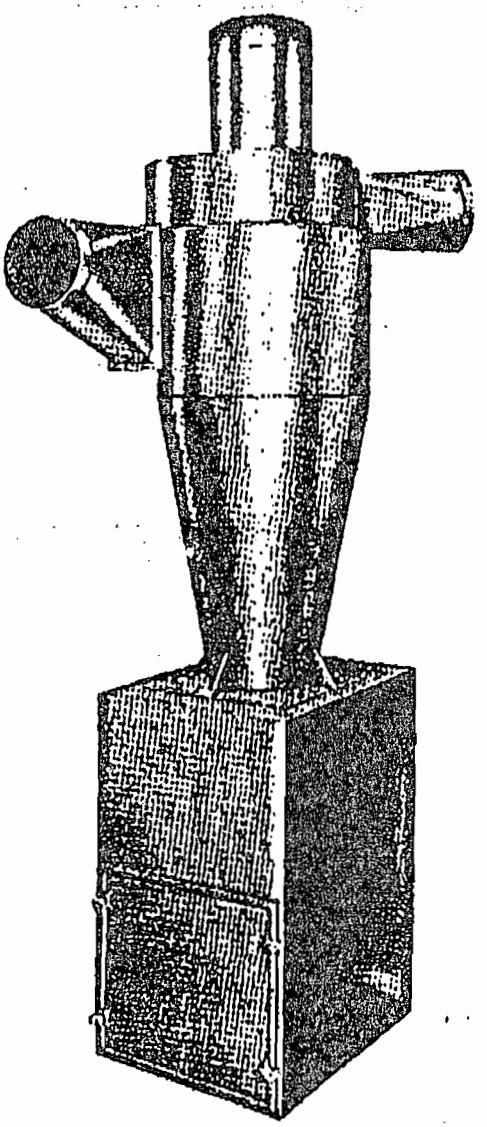
donaldson

TORIT DUST COLLECTORS

CYCLONE MODEL 3(

EFFICIENT DESIGN

TORIT's long tapering cone design and high inlet velocity place it in the "high efficiency" class — a cyclone built for top-level proficiency. In laboratory testing, Model 30-FM separated 99.2% of steel grindings, 99% of sawdust and 94% of baking flour by weight. "Fines" not separated in the cyclone are caught in after-filters on FB models. Sturdy steel construction is featured for long-lasting service both inside and out. The doors are felt-gasketed with specially-designed "Positive-Seal" fasteners. A tough weather-resistant finish is available at extra cost for outdoor installation.



UNIQUE FAN

The new material handling fan design delivers constant high performance at a low horsepower requirement (see multiple rating tables on reverse side). You get longer operation at a lower cost. And this fan is on the clean-air side. Grit, dust, chips, tramp iron and other foreign materials are deposited in the base *before the air reaches the fan.*

EASY CLEANING

Standard Model 30 contains 8.5 cubic feet of storage capacity in its handy pull-out drawer, mounted on four heavy-duty, free-rolling industrial casters. Extra-capacity bases or hoppers are available, built to order, as are single and double 55-gallon drum collectors (see specifications on back).

FLEXIBLE USE

Three-phase vertical motor in both 10 and 15 horsepower models is end-mounted; the motor unit and the blower are detachable for easy relocation of outlet ducts. And cones may be rotated on bases for flexible inlet positioning. The Model 30 can exhaust outside, or be used to recirculate air into the building. The FM model does not include an after-filter and is designed for outside exhaust. A totally enclosed motor couples with the weatherproof finish to ensure long life for outdoor installation. The FB model includes two after-filter sections containing four polyester felt filter tubes each.

TORIT DUST COLLECTORS

CYCLONE MODEL 30

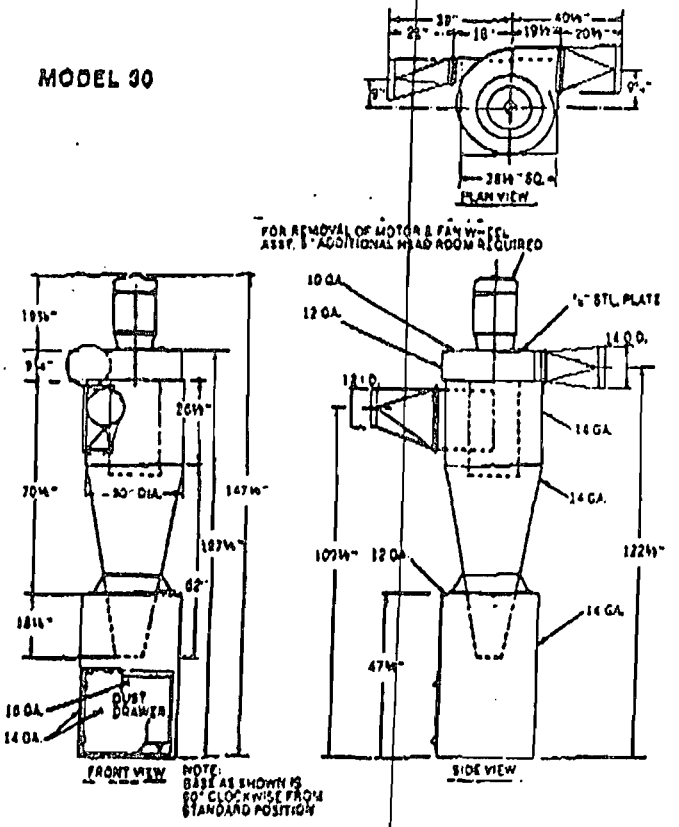
High Efficiency Centrifugal Separators

These ratings cover FM Models — a clean after-filter assembly offers no measurable resistance to airflow. However, resistance will increase during operation — due to dust-loading of filtering media — but can be kept at a minimum by cleaning filter media on a regular maintenance schedule.

PERFORMANCE TESTED

Performance ratings and A-scale sound level readings are available on all TORIT collectors. Ratings are read and verified under standard test conditions in TORIT's laboratories.

MODEL 30



NOTE

6 inches additional headroom required for assembly or removal of motor and fan wheel. Height shown (including motor) is maximum. For special requirements check with factory.

MULTIPLE RATING TABLES

MODEL 30	C.F.M.	INLET VELOCITY (12" DIA.) (FPM)	OUTLET VELOCITY (12" DIA.) (FPM)	EXTERNAL STATIC PRESSURE (Inches W.G.)
Series	5600	7140	5230	4.9"
30-15	5200	6625	4860	6.3"
	4800	6110	4380	7.9"
	4400	5600	4110	9.5"
	4000	6100	3740	11"
Series	4500	5732	4205	5.0"
30-10	4000	5095	3738	6.7"
	3500	4458	3271	8.4"
	3000	3821	2804	9.9"

SPECIFICATIONS

	MODEL 30 FM	MODEL 30 FB
Dust storage capacity	8.5 cu. ft.	8.5 cu. ft.
Motor	Model 30-10 includes 10 horsepower, 3600 rpm, 230-460/60/3 phase vertical motor; Model 30-15 includes 15 horsepower, 3600 rpm, 230-460/60/3 phase vertical motor. (specify voltage when ordering)	
Inlet diameter	12 inches	12 inches
Outlet diameter	14 inches	14 inches
Shipping weight	1210 lbs. (Model 30-15) 1175 lbs. (Model 30-10)	1420 lbs. (Model 30-15) 1386 lbs. (Model 30-10)

55-gallon drum stand will increase overall height by 12 inches.

Specifications subject to change without notice

TORIT district sales representatives are conveniently located throughout the United States and Canada. One will gladly work with you on your in-plant air pollution problems, and offer complete recommendations at no obligation to you. Check your Yellow Pages, under "Dust Collecting Systems", for local listing, or write.

LEADERS IN CONTROL OF IN-PLANT AIR POLLUTION

donaldson

Donaldson Company Inc.
Torit Division
Box 1299
Minneapolis, Minnesota 55440

Phone (612) 887-3921
Telex 291038

Printed in U.S.A.

Florida Department of Environmental Regulation

Twin Towers Office Bldg. • 2600 Blair Stone Road • Tallahassee, Florida 32399-2400

Bob Martinez, Governor Dale Twachtmann, Secretary John Shearer, Assistant Secretary

July 17, 1989

CERTIFIED MAIL-RETURN RECEIPT REQUESTED

Mr. John A. Cronkhite
Sr. Vice President/General Counsel
Sea Ray Boats, Inc.
2600 Sea Ray Blvd.
Knoxville, Tennessee 37914

Dear Mr. Cronkhite:

Attached is one copy of the Technical Evaluation and Preliminary Determination and proposed permits for the after-the-fact construction of a fiberglass boat plant and development facility at Merritt Island, Florida.

Please submit any written comments you wish to have considered concerning the Department's proposed action to Mr. Bill Thomas of the Bureau of Air Quality Management.

Sincerely,

C. H. Fancy, P.E.
Deputy Chief
Bureau of Air Quality
Management

CHF/JR/s

Attachments

cc: C. Collins, Central District
G. E. Cantelou, Jr., P.E.

BEFORE THE STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION

In the Matter of
Application for Permits by:

Sea Ray Boats, Inc.
Sea Ray Drive
Merritt Island, FL 32953

DER File Nos. AC 05-165270
AC 05-165271

INTENT TO ISSUE

The Department of Environmental Regulation hereby gives notice of its intent to issue permits (copies attached) for the proposed projects as detailed in the application specified above. The Department is issuing this Intent to Issue for the reasons stated in the attached Technical Evaluation and Preliminary Determination.

The applicant, Sea Ray Boats, Inc., applied on May 19, 1989, to the Department of Environmental Regulation for after-the-fact permits to construct a fiberglass boat plant and development facility in Merritt Island, Brevard County, Florida.

The Department has permitting jurisdiction under Chapter 403, Florida Statutes, and Florida Administrative Code Rules 17-2 and 17-4. The project is not exempt from permitting procedures. The Department has determined that air construction permits are required for the proposed work.

Pursuant to Section 403.815, F.S. and DER Rule 17-103.150, F.A.C., you (the applicant) are required to publish at your own expense the enclosed Notice of Intent to Issue Permits. The notice shall be published one time only within 30 days, in the legal ad section of a newspaper of general circulation in the area affected. For the purpose of this rule, "publication in a newspaper of general circulation in the area affected" means publication in a newspaper meeting the requirements of Sections 50.011 and 50.031, F.S., in the county where the activity is to take place. The applicant shall provide proof of publication to the Department, at the address specified within seven days of publication. Failure to publish the notice and provide proof of publication within the allotted time may result in the denial of the permits.

The Department will issue the permits with the attached conditions unless a petition for an administrative proceeding (hearing) is filed pursuant to the provisions of Section 120.57, F.S.

A person whose substantial interests are affected by the Department's proposed permitting decision may petition for an administrative proceeding (hearing) in accordance with Section 120.57, Florida Statutes. The petition must contain the information set forth below and must be filed (received) in the Office of General Counsel of the Department at 2600 Blair Stone Road, Tallahassee, Florida 32399-2400. Petitions filed by the permit applicant and the parties listed below must be filed within 14 days of receipt of this intent. Petitions filed by other persons must be filed within 14 days of publication of the public notice or within 14 days of receipt of this intent, whichever first occurs. Petitioner shall mail a copy of the petition to the applicant at the address indicated above at the time of filing. Failure to file a petition within this time period shall constitute a waiver of any right such person may have to request an administrative determination (hearing) under Section 120.57, Florida Statutes.

The Petition shall contain the following information;

(a) The name, address, and telephone number of each petitioner, the applicant's name and address, the Department Permit File Number and the county in which the project is proposed;

(b) A statement of how and when each petitioner received notice of the Department's action or proposed action;

(c) A statement of how each petitioner's substantial interests are affected by the Department's action or proposed action;

(d) A statement of the material facts disputed by Petitioner, if any;

(e) A statement of facts which petitioner contends warrant reversal or modification of the Department's action or proposed action;

(f) A statement of which rules or statutes petitioner contends require reversal or modification of the Department's action or proposed action; and

(g) A statement of the relief sought by petitioner, stating precisely the action petitioner wants the Department to take with respect to the Department's action or proposed action.

If a petition is filed, the administrative hearing process is designed to formulate agency action. Accordingly, the Department's final action may be different from the position taken by it in this notice. Persons whose substantial interests will be affected by any decision of the Department with regard to the applications have the right to petition to become a party to the proceeding. The petition must conform to the requirements specified above and be filed (received) within 14 days of publication of this notice in the Office in General Counsel at the above address of the Department. Failure to petition within the allowed time frame constitutes a waiver of any right such

person has to request a hearing under Section 120.57, F.S., and to participate as a party to this proceeding. Any subsequent intervention will only be at the approval of the presiding officer upon motion filed pursuant to Rule 28-5.207, F.A.C.

Executed in Tallahassee, Florida.

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL REGULATION

C. H. Fancy, P.E.
Deputy Chief
Bureau of Air Quality
Management

Copies furnished to:

C. Collins, Central Dist.
G. E. Cantelou, Jr., P.E.

CERTIFICATE OF SERVICE

The undersigned duly designated deputy clerk hereby certifies that this NOTICE OF INTENT TO ISSUE and all copies were mailed before the close of business on July 17, 1989.

FILING AND ACKNOWLEDGEMENT
FILED, on this date, pursuant to §120.52(9), Florida Statutes, with the designated Department Clerk, receipt of which is hereby acknowledged.

Martha J. Clark July 17, 1989
Clerk Date

State of Florida
Department of Environmental Regulation
Notice of Intent to Issue

The Department of Environmental Regulation hereby gives notice of its intent to issue permits to Sea Ray Boats, Inc., for after-the-fact construction of a fiberglass boat building plant and development facility in Merritt Island, Florida. A determination of Best Available Control Technology (BACT) was not required. The Department is issuing this Intent to Issue for the reasons stated in the Technical Evaluation and Preliminary Determination.

A person whose substantial interests are affected by the Department's proposed permitting decision may petition for an administrative proceeding (hearing) in accordance with Section 120.57, Florida Statutes. The petition must contain the information set forth below and must be filed (received) in the Office of General Counsel of the Department at 2600 Blair Stone Road, Tallahassee, Florida 32399-2400, within fourteen (14) days of publication of this notice. Petitioner shall mail a copy of the petition to the applicant at the address indicated above at the time of filing. Failure to file a petition within this time period shall constitute a waiver of any right such person may have to request an administrative determination (hearing) under Section 120.57, Florida Statutes.

The Petition shall contain the following information;

(a) The name, address, and telephone number of each petitioner, the applicant's name and address, the Department Permit File Number and the county in which the project is proposed;
(b) A statement of how and when each petitioner received notice of the Department's action or proposed action;
(c) A statement of how each petitioner's substantial interests are affected by the Department's action or proposed action;
(d) A statement of the material facts disputed by Petitioner, if any;
(e) A statement of facts which petitioner contends warrant reversal or modification of the Department's action or proposed action;
(f) A statement of which rules or statutes petitioner contends require reversal or modification of the Department's action or proposed action; and
(g) A statement of the relief sought by petitioner, stating precisely the action petitioner wants the Department to take with respect to the Department's action or proposed action.

If a petition is filed, the administrative hearing process is designed to formulate agency action. Accordingly, the Department's

final action may be different from the position taken by it in this Notice. Persons whose substantial interests will be affected by any decision of the Department with regard to the applications have the right to petition to become a party to the proceeding. The petition must conform to the requirements specified above and be filed (received) within 14 days of publication of this notice in the Office of General Counsel at the above address of the Department. Failure to petition within the allowed time frame constitutes a waiver of any right such person has to request a hearing under Section 120.57, F.S., and to participate as a party to this proceeding. Any subsequent intervention will only be at the approval of the presiding officer upon motion filed pursuant to Rule 28-5.207, F.A.C.

The applications are available for public inspection during normal business hours, 8:00 a.m. to 5:00 p.m., Monday through Friday, except legal holidays, at:

Department of Environmental Regulation
Bureau of Air Quality Management
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

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

Any person may send written comments on the proposed action to Mr. Bill Thomas at the Department's Tallahassee address. All comments mailed within 14 days of the publication of this notice will be considered in the Department's final determination.

Technical Evaluation
and
Preliminary Determination

Sea Ray Boats, Inc.
Brevard County
Merritt Island, Florida

Fiberglass Boat Plant and Development Facility
Permit Numbers:
AC 05-165270
AC 05-165271

Florida Department of Environmental Regulation
Division of Air Resources Management
Bureau of Air Quality Management
Central Air Permitting

I. Application Information

A. Applicant

Sea Ray Boats, Inc.
Sea Ray Drive
Merritt Island, Florida 32953

B. Request

The Department received applications on May 19, 1989, for permits to construct a fiberglass boat plant and development facility at the applicant's site in Merritt Island, Florida. The applications were deemed complete on June 16, 1989.

C. Location/Classification

The applicant's boat plant and development facility (SIC Code 3732) is located off State Road 3 near the Canaveral Port Authority in Merritt Island. Latitude and longitude of the boat plant are 28°24'32" N and 80°42'23"W, respectively, while the latitude and longitude of the development facility are 28°24'22"N and 80°42'08"W, respectively.

II. Project Description/Emissions

Fiberglass pleasure boats are manufactured by the applicant using an airless mold injection method. Laminations of resin and fiberglass are applied over gel coat before the wooden and foam structural parts are installed. After lamination the boats are extracted from their molds and trimmed of excess material. Upholstered parts are then prepared and used in the final assembly along with parts manufactured elsewhere.

Fiberglass boat manufacturing generates particulate emissions (sawdust from wood working and fiberglass from grinding). A new high efficiency dust collection system is being installed in the boat plant to replace existing dust control equipment. It will recover essentially all of the particulate emitted.

Fiberglass boat manufacturing also generates hydrocarbon (VOC/OS: volatile organic compounds/organic solvents) emissions from various operations (i.e., molding, clean-up, etc.). The potential VOC/OS emissions from the boat plant and development facility are projected to be 176 tons per year. Because the majority of the fiberglass industry in Florida have been using dilution air to purge production buildings of their VOC/OS emissions (toxic) with no additional controls, the Department is approaching the point at which control strategies are going to be imposed to reduce, if not eliminate, these emissions. Therefore,

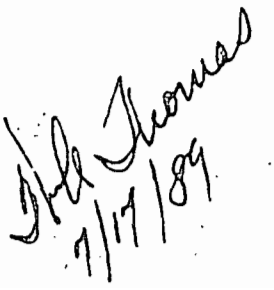
in an attempt to minimize impacts, the Department is going to require that the applicant submit a conceptual plan and potential course of action that will provide the Department with reasonable assurance that objectionable odors and toxic air pollutants in quantities that could exceed acceptable ambient concentrations will not be discharged off of the facility's property boundary or where the public has access, whichever is closest, pursuant to Florida Administrative Code (F.A.C.) Rules 17-2.200 and 17-2.620(1) and (2). The plan should contain at a minimum, but not be limited to, various control system strategies/options that might be retrofitted/installed to reduce or eventually eliminate emissions of VOC/OS from each type of operation, associated time and cost analyses, and VOC/OS substitutes.

III. Rule Applicability

The construction permit applications are subject to review under Chapter 403, Florida Statutes, and F.A.C. Chapters 17-2 and 17-4. The facility is located in an area classified as attainment for all of the regulated air pollutants. Since the boat plant and development facility are classified as minor (total emissions less than 250 TPY), they are not subject to the new source review requirements of Rule 17-2.500. Applicable rules are (1) F.A.C. Rule 17-2.520, Sources Not Subject to Prevention of Significant Deterioration or Nonattainment Requirements; (2) F.A.C. Rule 17-2.610, General Particulate Emission Limiting Standards; and (3) F.A.C. Rule 17-2.620, General Pollutant Emission Limiting Standards.

IV. Conclusion

Based on the information provided by Sea Ray Boats, Inc., the Department has reasonable assurance that the boat plant and development facility, as specified herein, and subject to the conditions proposed herein, will not cause or contribute to a violation of an ambient air quality standard, PSD increment, or any other technical provisions of Chapter 17-2 of the Florida Administrative Code.



Florida Department of Environmental Regulation

Twin Towers Office Bldg. ● 2600 Blair Stone Road ● Tallahassee, Florida 32399-2400

Bob Martinez, Governor Dale Twachtmann, Secretary John Shearer, Assistant Secretary

PERMITTEE:
Sea Ray Boats, Inc.
Sea Ray Drive
Merritt Island, FL 32953

Permit Number: AC 05-165270
Expiration Date: March 31, 1990
County: Brevard
Latitude/Longitude: 28°24'32"N
80°42'23"W
Project: Fiberglass Boat Plant

This permit is issued under the provisions of Chapter 403, Florida Statutes, and Florida Administrative Code Chapters 17-2 and 17-4. The above named permittee is hereby authorized to perform the work or operate the facility shown on the application and approved drawing(s), plans, and other documents attached hereto or on file with the Department and made a part hereof and specifically described as follows:

For the after-the-fact construction of a facility to produce fiberglass boats. This facility is located near the Canaveral Port Authority in Merritt Island, Brevard County, Florida. The UTM coordinates of this site are Zone 17, 529 km E and 3,142 km N.

The source shall be in accordance with the permit application, plans, documents, amendments and drawings, except as otherwise noted in the General and Specific Conditions.

Attachment:

1. Application to Operate/Construct Air Pollution Sources, DER Form 17-202(1), received on May 19, 1989.

PERMITTEE:
Sea Ray Boats

Permit No. AC 05-165270
Expiration Date: March 31, 1990

GENERAL CONDITIONS:

1. The terms, conditions, requirements, limitations, and restrictions set forth herein are "Permit Conditions" and as such are binding upon the permittee and enforceable pursuant to the authority of Sections 403.161, 403.727, or 403.859 through 403.861, Florida Statutes. The permittee is hereby placed on notice that the Department will review this permit periodically and may initiate enforcement action for any violation of the "Permit Conditions" by the permittee, its agents, employees, servants or representatives.

2. This permit is valid only for the specific processes and operations applied for and indicated in the approved drawings or exhibits. Any unauthorized deviation from the approved drawings, exhibits, specifications, or conditions of this permit may constitute grounds for revocation and enforcement action by the Department.

3. As provided in Subsections 403.087(6) and 403.722(5), Florida Statutes, the issuance of this permit does not convey any vested rights or any exclusive privileges. Nor does it authorize any injury to public or private property or any invasion of personal rights, nor any infringement of federal, state or local laws or regulations. This permit does not constitute a waiver of or approval of any other Department permit that may be required for other aspects of the total project which are not addressed in the permit.

4. This permit conveys no title to land or water, does not constitute state recognition or acknowledgement of title, and does not constitute authority for the use of submerged lands unless herein provided and the necessary title or leasehold interests have been obtained from the state. Only the Trustees of the Internal Improvement Trust Fund may express state opinion as to title.

5. This permit does not relieve the permittee from liability for harm or injury to human health or welfare, animal, plant or aquatic life or property and penalties therefore caused by the construction or operation of this permitted source, nor does it allow the permittee to cause pollution in contravention of Florida Statutes and Department rules, unless specifically authorized by an order from the Department.

GENERAL CONDITIONS:

6. The permittee shall at all times properly operate and maintain the facility and systems of treatment and control (and related appurtenances) that are installed or used by the permittee to achieve compliance with the conditions of this permit, as required by Department rules. This provision includes the operation of backup or auxiliary facilities or similar systems when necessary to achieve compliance with the conditions of the permit and when required by Department rules.

7. The permittee, by accepting this permit, specifically agrees to allow authorized Department personnel, upon presentation of credentials or other documents as may be required by law, access to the premises, at reasonable times, where the permitted activity is located or conducted for the purpose of:

a. Having access to and copying any records that must be kept under the conditions of the permit;

b. Inspecting the facility, equipment, practices, or operations regulated or required under this permit; and

c. Sampling or monitoring any substances or parameters at any location reasonably necessary to assure compliance with this permit or Department rules.

Reasonable time may depend on the nature of the concern being investigated.

8. If, for any reason, the permittee does not comply with or will be unable to comply with any condition or limitation specified in this permit, the permittee shall immediately notify and provide the Department with the following information:

a. a description of and cause of non-compliance; and

b. the period of noncompliance, including exact dates and times; or, if not corrected, the anticipated time the non-compliance is expected to continue, and steps being taken to reduce, eliminate, and prevent recurrence of the non-compliance.

GENERAL CONDITIONS:

The permittee shall be responsible for any and all damages which may result and may be subject to enforcement action by the Department for penalties or revocation of this permit.

9. In accepting this permit, the permittee understands and agrees that all records, notes, monitoring data and other information relating to the construction or operation of this permitted source, which are submitted to the Department, may be used by the Department as evidence in any enforcement case arising under the Florida Statutes or Department rules, except where such use is proscribed by Sections 403.73 and 403.111, Florida Statutes.

10. The permittee agrees to comply with changes in Department rules and Florida Statutes after a reasonable time for compliance, provided however, the permittee does not waive any other rights granted by Florida Statutes or Department rules.

11. This permit is transferable only upon Department approval in accordance with Florida Administrative Code Rules 17-4.12 and 17-30.30, as applicable. The permittee shall be liable for any non-compliance of the permitted activity until the transfer is approved by the Department.

12. This permit is required to be kept at the work site of the permitted activity during the entire period of construction or operation.

13. This permit also constitutes:

( ) Determination of Best Available Control Technology (BACT)
( ) Determination of Prevention of Significant Deterioration (PSD)
( ) Compliance with New Source Performance Standards

14. The permittee shall comply with the following monitoring and record keeping requirements:

a. Upon request, the permittee shall furnish all records and plans required under Department rules. The retention period for all records will be extended automatically, unless otherwise stipulated by the Department, during the course of any unresolved enforcement action.

GENERAL CONDITIONS:

b. The permittee shall retain at the facility or other location designated by this permit records of all monitoring information (including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation), copies of all reports required by this permit, and records of all data used to complete the application for this permit. The time period of retention shall be at least three years from the date of the sample, measurement, report or application unless otherwise specified by Department rule.

c. Records of monitoring information shall include:

- the date, exact place, and time of sampling or measurements;
- the person responsible for performing the sampling or measurements;
- the date(s) analyses were performed;
- the person responsible for performing the analyses;
- the analytical techniques or methods used; and
- the results of such analyses.

15. When requested by the Department, the permittee shall within a reasonable time furnish any information required by law which is needed to determine compliance with the permit. If the permittee becomes aware that relevant facts were not submitted or were incorrect in the permit application or in any report to the Department, such facts or information shall be submitted or corrected promptly.

SPECIFIC CONDITIONS:

1. The construction and operation of this source shall be in accordance with the capacities and specifications stated in the application.

2. The plant shall be allowed to operate for up to 3,840 hours per year.

3. Visible emissions from the dust collection system shall not be greater than 5% opacity and compliance shall be demonstrated at 90-100% of permitted capacity using DER Method 9 in accordance with F.A.C. Rule 17-2.700.

SPECIFIC CONDITIONS:

4. Hydrocarbon emissions (VOC) shall not exceed the following calculated values and total VOC emissions from the facility shall not exceed 65.5 lbs/hr, 1048 lbs/day (30 day average), and 125.8 tons/year. Compliance shall be demonstrated by applying the following raw material utilization rates and emission factors:

	Utilization Rate lbs/hr	Emission Factor	Emissions lbs/hr
Styrene (Resin)	272.5	0.06	16.4
Styrene (Gel Coat)	37.7	0.30	11.3
Methyl Methacrylate	125.7	0.05	6.3
Methylene Chloride	2.5	0.30	0.8
Aromatic Hydrocarbon	21.9	0.16	3.5
1,1,1-Trichloroethane	2.5	0.60	1.5
Acetone	24.4	1.00	24.4
Xylene	21.9	0.06	1.3

5. Nonvolatile acetone substitutes shall be used to the maximum extent practicable to further reduce the quantity of acetone consumed.

6. No air pollutants shall be discharged which cause or contribute to an objectionable odor (F.A.C. Rule 17-2.620(2)).

7. The dust collector compliance test shall be conducted within 90 days after this permit is issued and the results reported to the Department's Central District office before this construction permit expires. The Department shall be notified at least 15 days in advance of the test.

8. VOC compliance shall be demonstrated over a 90-day period and the results reported to the Department's Central District office before this construction permit expires. The Department shall be notified at least 15 days in advance of the commencement of the 90-day compliance demonstration period.

9. Six months from the date of the construction permit, Sea Ray Boats shall submit a conceptual plan and potential course of action that will provide the Department with reasonable assurance that objectionable odors and toxic air pollutants in quantities that could exceed acceptable ambient concentrations will not be discharged off of the facility's property boundary or where the public has access, whichever is closest, pursuant to F.A.C. Rules 17-2.200 and 17-2.620(1) and (2). The plan should contain at a minimum, but not be limited to, various control system strategies/options that might be retrofitted/installed to reduce or eventually eliminate emissions of VOC/OS from each type of operation, associated time and cost analyses, and VOC/OS substitutes.

PERMITTEE:
Sea Ray Boats

Permit No. AC 05-165270
Expiration Date: March 31, 1990

SPECIFIC CONDITIONS:

10. The permittee, for good cause, may request that this construction permit be extended. Such a request shall be submitted to the BAQM prior to 60 days before the expiration of the permit (F.A.C. 17-4.090).

11. An application for an operation permit must be submitted to the Central District office at least 90 days prior to the expiration date of this construction permit or within 45 days after completion of compliance testing, whichever occurs first. To properly apply for an operation permit, the applicant shall submit the appropriate application form, fee, certification that construction was completed noting any deviations from the conditions in the construction permit, and compliance test reports as required by this permit (F.A.C. 17-4.220).

Issued this _____ day
of _____, 1989

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL REGULATION

_____
Dale Twachtmann, Secretary

Florida Department of Environmental Regulation

Twin Towers Office Bldg. • 2600 Blair Stone Road • Tallahassee, Florida 32399-2400

Bob Martinez, Governor Dale Twachtmann, Secretary John Shearer, Assistant Secretary

PERMITTEE:
Sea Ray Boats, Inc.
Sea Ray Drive
Merritt Island, FL 32953

Permit Number: AC 05-165271
Expiration Date: March 31, 1990
County: Brevard
Latitude/Longitude: 28°24'22"N
80°42'08"W
Project: Development Facility

This permit is issued under the provisions of Chapter 403, Florida Statutes, and Florida Administrative Code Chapters 17-2 and 17-4. The above named permittee is hereby authorized to perform the work or operate the facility shown on the application and approved drawing(s), plans, and other documents attached hereto or on file with the Department and made a part hereof and specifically described as follows:

For the after-the-fact construction of a facility to develop prototypes for new fiberglass boats. This facility is located near the Canaveral Port Authority in Merritt Island, Brevard County, Florida. The UTM coordinates of this site are Zone 17, 529 km E and 3,142.3 km N.

The source shall be in accordance with the permit application, plans, documents, amendments and drawings, except as otherwise noted in the General and Specific Conditions.

Attachment:

1. Application to Operate/Construct Air Pollution Sources, DER Form 17-202(1), received on May 19, 1989.

PERMITTEE:
Sea Ray Boats

Permit No. AC 05-165271
Expiration Date: March 31, 1990

GENERAL CONDITIONS:

1. The terms, conditions, requirements, limitations, and restrictions set forth herein are "Permit Conditions" and as such are binding upon the permittee and enforceable pursuant to the authority of Sections 403.161, 403.727, or 403.859 through 403.861, Florida Statutes. The permittee is hereby placed on notice that the Department will review this permit periodically and may initiate enforcement action for any violation of the "Permit Conditions" by the permittee, its agents, employees, servants or representatives.

2. This permit is valid only for the specific processes and operations applied for and indicated in the approved drawings or exhibits. Any unauthorized deviation from the approved drawings, exhibits, specifications, or conditions of this permit may constitute grounds for revocation and enforcement action by the Department.

3. As provided in Subsections 403.087(6) and 403.722(5), Florida Statutes, the issuance of this permit does not convey any vested rights or any exclusive privileges. Nor does it authorize any injury to public or private property or any invasion of personal rights, nor any infringement of federal, state or local laws or regulations. This permit does not constitute a waiver of or approval of any other Department permit that may be required for other aspects of the total project which are not addressed in the permit.

4. This permit conveys no title to land or water, does not constitute state recognition or acknowledgement of title, and does not constitute authority for the use of submerged lands unless herein provided and the necessary title or leasehold interests have been obtained from the state. Only the Trustees of the Internal Improvement Trust Fund may express state opinion as to title.

5. This permit does not relieve the permittee from liability for harm or injury to human health or welfare, animal, plant or aquatic life or property and penalties therefore caused by the construction or operation of this permitted source, nor does it allow the permittee to cause pollution in contravention of Florida Statutes and Department rules, unless specifically authorized by an order from the Department.

GENERAL CONDITIONS:

6. The permittee shall at all times properly operate and maintain the facility and systems of treatment and control (and related appurtenances) that are installed or used by the permittee to achieve compliance with the conditions of this permit, as required by Department rules. This provision includes the operation of backup or auxiliary facilities or similar systems when necessary to achieve compliance with the conditions of the permit and when required by Department rules.

7. The permittee, by accepting this permit, specifically agrees to allow authorized Department personnel, upon presentation of credentials or other documents as may be required by law, access to the premises, at reasonable times, where the permitted activity is located or conducted for the purpose of:

a. Having access to and copying any records that must be kept under the conditions of the permit;

b. Inspecting the facility, equipment, practices, or operations regulated or required under this permit; and

c. Sampling or monitoring any substances or parameters at any location reasonably necessary to assure compliance with this permit or Department rules.

Reasonable time may depend on the nature of the concern being investigated.

8. If, for any reason, the permittee does not comply with or will be unable to comply with any condition or limitation specified in this permit, the permittee shall immediately notify and provide the Department with the following information:

a. a description of and cause of non-compliance; and

b. the period of noncompliance, including exact dates and times; or, if not corrected, the anticipated time the non-compliance is expected to continue, and steps being taken to reduce, eliminate, and prevent recurrence of the non-compliance.

GENERAL CONDITIONS:

The permittee shall be responsible for any and all damages which may result and may be subject to enforcement action by the Department for penalties or revocation of this permit.

9. In accepting this permit, the permittee understands and agrees that all records, notes, monitoring data and other information relating to the construction or operation of this permitted source, which are submitted to the Department, may be used by the Department as evidence in any enforcement case arising under the Florida Statutes or Department rules, except where such use is proscribed by Sections 403.73 and 403.111, Florida Statutes.

10. The permittee agrees to comply with changes in Department rules and Florida Statutes after a reasonable time for compliance, provided however, the permittee does not waive any other rights granted by Florida Statutes or Department rules.

11. This permit is transferable only upon Department approval in accordance with Florida Administrative Code Rules 17-4.12 and 17-30.30, as applicable. The permittee shall be liable for any non-compliance of the permitted activity until the transfer is approved by the Department.

12. This permit is required to be kept at the work site of the permitted activity during the entire period of construction or operation.

13. This permit also constitutes:

( ) Determination of Best Available Control Technology (BACT)
( ) Determination of Prevention of Significant Deterioration (PSD)
( ) Compliance with New Source Performance Standards

14. The permittee shall comply with the following monitoring and record keeping requirements:

a. Upon request, the permittee shall furnish all records and plans required under Department rules. The retention period for all records will be extended automatically, unless otherwise stipulated by the Department, during the course of any unresolved enforcement action.

GENERAL CONDITIONS:

b. The permittee shall retain at the facility or other location designated by this permit records of all monitoring information (including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation), copies of all reports required by this permit, and records of all data used to complete the application for this permit. The time period of retention shall be at least three years from the date of the sample, measurement, report or application unless otherwise specified by Department rule.

c. Records of monitoring information shall include:

- the date, exact place, and time of sampling or measurements;
- the person responsible for performing the sampling or measurements;
- the date(s) analyses were performed;
- the person responsible for performing the analyses;
- the analytical techniques or methods used; and
- the results of such analyses.

15. When requested by the Department, the permittee shall within a reasonable time furnish any information required by law which is needed to determine compliance with the permit. If the permittee becomes aware that relevant facts were not submitted or were incorrect in the permit application or in any report to the Department, such facts or information shall be submitted or corrected promptly.

SPECIFIC CONDITIONS:

1. The construction and operation of this source shall be in accordance with the capacities and specifications stated in the application.

2. The plant shall be allowed to operate for up to 3,840 hours per year.

3. Visible emissions from the dust collection system shall not be greater than 5% opacity and compliance shall be demonstrated at 90-100% of permitted capacity using DER Method 9 in accordance with F.A.C. Rule 17-2.700.

SPECIFIC CONDITIONS:

4. Hydrocarbon emissions (VOC) shall not exceed the following calculated values and total VOC emissions from the facility shall not exceed 26.2 lbs/hr, 420 lbs/day (30 day average), and 50.5 tons/year. Compliance shall be demonstrated by applying the following raw material utilization rates and emission factors:

	Utilization Rate lbs/hr	Emission Factor	Emissions lbs/hr
Styrene (Resin-AME)	10.2	0.06	0.6
Styrene (Resin-RCI)	40.8	0.06	2.5
Styrene (Gel coat)	6.4	0.30	1.9
Methyl Methacrylate	18.3	0.05	0.9
1,1,1-Trichloroethane	0.2	0.68	0.1
Acetone	20.1	1.00	20.1
Toluene	0.2	0.08	0.02
Misc.	0.1	1.00	0.1

5. Nonvolatile acetone substitutes shall be used to the maximum extent practicable to further reduce the quantity of acetone consumed.

6. No air pollutants shall be discharged which cause or contribute to a objectionable odor (F.A.C. Rule 17-2.620(2)).

7. VOC Compliance shall be demonstrated over a 90-day period and the results reported to the Department's Central District office before this construction permit expires. The Department shall be notified at least 15 days in advance of the commencement of the 90 day compliance demonstration period.

8. The dust collector compliance test shall be conducted within 90 days after this permit is issued and the results reported to the Department's Central District office before this construction permit expires. The Department shall be notified at least 15 days in advance of the test.

9. Six months from the date of the construction permit, Sea Ray Boats shall submit a conceptual plan and potential course of action that will provide the Department with reasonable assurance that objectionable odors and toxic air pollutants in quantities that could exceed acceptable ambient concentrations will not be discharged off of the facility's property boundary or where the public has access, whichever is closest, pursuant to F.A.C. Rules 17-2.200 and 17-2.620(1) and (2). The plan should contain at a minimum, but not be limited to, various control system strategies/options that might be retrofitted/installed to reduce or eventually eliminate emissions of VOC/OS from each type of operation, associated time and cost analyses, and VOC/OS substitutes.

PERMITTEE:
Sea Ray Boats

Permit No. AC 05-165271
Expiration Date: March 31, 1990

SPECIFIC CONDITIONS:

10. The permittee, for good cause, may request that this construction permit be extended. Such a request shall be submitted to the BAQM prior to 60 days before the expiration of the permit (F.A.C. Rule 17-4.090).

11. An application for an operation permit must be submitted to the Central District office at least 90 days prior to the expiration date of this construction permit or within 45 days after completion of compliance testing, whichever occurs first. To properly apply for an operation permit, the applicant shall submit the appropriate application form, fee, certification that construction was completed noting any deviations from the conditions in the construction permit, and compliance test reports as required by this permit (F.A.C. 17-4.220).

Issued this _____ day
of _____, 1989

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL REGULATION

_____
Dale Twachtmann, Secretary

DIVISION OF AIR RESOURCE MANAGEMENT

(For Internal Use Only)

ROUTING AND TRANSMITTAL SLIP

ACTION NO

ACTION DUE DATE

1. TO: (NAME, OFFICE, LOCATION) Tom Rogers	Initial	
	Date	
2.	Initial	
	Date	
3.	Initial	
	Date	
4.	Initial	
	Date	

REMARKS:

Please run the model using the revised VOC emission estimate of 233.6 TPY.

INFORMATION	
	Review & Return
	Review & File
	Initial & Forward

DISPOSITION	
	Review & Respond
	Prepare Response
	For My Signature
	For Your Signature
	Let's Discuss
	Set Up Meeting
	Investigate & Report
	Initial & Forward
	Distribute
	Concurrence
✓	For Processing
	Initial & Return

FROM: John Reynolds

DATE 6-19-89

PHONE

State of Florida
DEPARTMENT OF ENVIRONMENTAL REGULATION

INTEROFFICE MEMORANDUM

For Routing To District Offices And/Or To Other Than The Addressee

To: _____ Locn. _____
To: _____ Locn. _____
To: _____ Locn. _____
From: _____ Date _____

Reply Optional [ ] Reply Required [ ] Info. Only [ ]
Date Due: _____ Date Due: _____

CENTRAL DISTRICT

OCD-AP-89-0494

TO: John Glunn

THROUGH: A. Alexander

FROM: Charles M. Collins CMC

DATE: June 9, 1989

SUBJECT: BREVARD CO - SEA RAY BOAT, AMBIENT AIR IMPACT

We are currently taking enforcement action against Sea Ray Boat Company, Brevard County for operating air pollution sources without permits.

The company operates two boating operations at one facility with total VOC actual emissions of 185.6 tons/year and total VOC potential emissions of 313.64 tons/year. In addition, Sea Ray operates another permitted boating operation 60 feet from the unpermitted facility with actual emissions of 95.6 tons/year.

The company has submitted the applications for permits to CAPS. Please run air models of the three operations combined, and advise if source is in compliance with current ambient air ground level concentration standards.

REVISED EMISSION ESTIMATES:

OLD PLANT - 125.6 TPY VOC
NEW PLANT - 57.5 " "
DEV. FACILITY - 50.5 " "
233.6 " "

Florida Department of Environmental Regulation

Twin Towers Office Bldg. ● 2600 Blair Stone Road ● Tallahassee, Florida 32399-2400

~~Bob Martinez, Governor~~ ~~Dale Twachtmann, Secretary~~ ~~John Shearer, Assistant Secretary~~

Lawton Chiles, Governor Carol M. Browner, Secretary

January 10, 1991

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. John A. Cronkhite
Senior Vice President/General Counsel
Sea Ray Boats, Inc.
2600 Sea Ray Boulevard
Knoxville, Tennessee 37914

Dear Mr. Cronkhite:

The Department received your request for modification of the construction permit referenced below. The request is acceptable and the following shall be changed:

Project: AC 05-165270

FROM:

Hydrocarbon emissions (VOC) shall not exceed the following calculated values and total VOC emissions from the facility shall not exceed 60.7 lbs/hr, 971.2 lbs/day (30 day average), and 105.6 tons/year. Compliance shall be demonstrated by applying the following raw material utilization rates and emission factors:

	Utilization Rate lbs/hr	Emission Factor	Emissions lbs/hr
Styrene (Resin)	258.9	0.06	15.5
Styrene (Gel Coat)	49.3	0.30	14.8
Methyl Methacrylate	94.8	0.05	4.7
Toluene	9.5	0.08	0.8
1,1,1-Trichloroethane	9.5	0.68	6.4
Acetone	11.6	1.00	11.6
Paints (Misc.)	16.8	0.41	6.9

TO:

Hydrocarbon emissions (VOC) shall not exceed the following calculated values and total VOC emissions from the facility shall not exceed 60.7 lbs/hr, 971.2 lbs/day (30 day average), and 116.5 tons/year. Compliance shall be demonstrated by applying the following raw material utilization rates and emission factors:

	Utilization Rate lbs/hr	Emission Factor	Emissions lbs/hr
Styrene (Resin)	258.9	0.06	15.5
Styrene (Gel Coat)	49.3	0.30	14.8
Methyl Methacrylate	94.8	0.05	4.7
Toluene	9.5	0.08	0.8
1,1,1-Trichloroethane	9.5	0.68	6.4
Acetone	11.6	1.00	11.6
Paints (Misc.)	16.8	0.41	6.9

Attachment to be Incorporated:

Letter from Cantelou Associates dated December 27, 1990, requesting a change in the annual VOC emissions rate.

A copy of this letter must be attached to construction permit AC 05-165270 and shall become a part of that permit.

Sincerely,

STEVE SMALLWOOD, P.E.
Director
Division of Air Resources Management

SS/JR/plm

c: C. Collins, Central Dist.
G. E. Cantelou, Jr., P.E.

SEA RAY BOATS, INC.
WORLD HEADQUARTERS, 2600 SEA RAY BLVD., KNOXVILLE, TENNESSEE 37914 (615) 522-4181

September 26, 1988

#939641 8084

VIA FEDERAL EXPRESS

RECEIVED
SEP 27 1988
DER-BAQM

Mr. C. H. Fancy, P.E.
Deputy Chief
Bureau of Air Quality Management
Florida Department of Environmental Regulation
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

RE: Application for Permit

Dear Mr. Fancy:

Pursuant to your letter of September 8, 1988 and the instructions therein regarding our Application for Permit to construct a fiberglass boat plant in Merritt Island please find enclosed herewith our proof of publication of the Notice of Intent, which was published in the Florida Today newspaper on September 20, 1988.

Very truly yours,

SEA RAY BOATS, INC.

John A. Cronkhite /ck

John A. Cronkhite
Senior Vice President/
General Counsel

JAC:cbh

Enclosure
copied: John Reynolds
Chuck Collins, E.P. Dist.

CAPE PUBLICATIONS, INC.

The Times
Published Weekly on Wednesday

THE TRIBUNE
Published Weekly on Wednesday

FLORIDA TODAY
Published Daily

ST☆R-ADVOCATE
Published Weekly on Wednesday

STATE OF FLORIDA
COUNTY OF BREVARD

Before the undersigned authority personally appeared **Linda L. Spicer** who on oath says that he/she is **Legal Advertising Clerk** of the **FLORIDA TODAY**, a newspaper published in Brevard County, Florida; that the attached copy of advertising being a Notice of Intent

in the matter of permit to Sea Ray Boats, Inc.

in the Court

was published in the **FLORIDA TODAY NEWSPAPER** in the issues of September 20, 1988

Affiant further says that the said **FLORIDA TODAY NEWSPAPER** is a newspaper published in said Brevard County, Florida and that the said newspaper has heretofore been continuously published in said Brevard County, Florida regularly as stated above, and has been entered as second class mail matter at the post office in **COCOA**, said Brevard County, Florida for a period of one year next preceeding the first publication of the attached copy of advertisement; and affiant further says that he has neither paid nor promised any person, firm or corporation any discount, rebate, commission or refund for the purpose of securing this advertisement for publication in said newspaper.

Linda L. Spicer

Sworn and subscribed to before me this

20th day of September A.D., 19 88

Carol S. Hammack

Notary Public, Florida, State at Large
My Commission Expires May 27 1989

State of Florida
Department of
Environmental Regulation
Notice of Intent

The Department of Environmental Regulation hereby gives notice of its intent to issue a permits to Sea Ray Boats, Inc. to construct a fiberglass boat building plant at their facility in Merritt Island, Florida. The Department is issuing this intent to issue for the reasons stated in the Technical Evaluation and Preliminary Determination.

Persons whose substantial interests are affected by the Department's proposed permitting decision may petition for an administrative determination (hearing) in accordance with Section 120.57, Florida Statutes. The petition must conform to the requirements of Chapters 17-103 and 28-5, Florida Administrative Code, and must be filed (received) in the Department's Office of General Counsel, 2600 Blair Stone Road, Twin Towers Office Building, Tallahassee, Florida 32399-2400, within fourteen (14) days of publication of this notice. Failure to file a petition within this time period constitutes a waiver of any right such person has to request an administrative determination (hearing) under Section 120.57, Florida Statutes.

If a petition is filed, the administrative hearing process is designed to formulate agency action. Accordingly, the Department's final action may be different from the proposed agency action. Therefore, persons who may not wish to file a petition may wish to intervene in the proceeding. A petition for intervention must be filed pursuant to Rule 28-5.207, Florida Administrative Code, at least five (5) days before the final hearing and be filed with the hearing officer if one has been assigned at the Division of Administrative Hearings, Department of Administration, 2009 Apalachee Parkway, Tallahassee, Florida 32301. If no hearing officer has been assigned, the petition is to be filed with the Department's Office of General Counsel, 2600 Blair Stone Road, Tallahassee, Florida 32399-2400. Failure to petition to intervene within the allowed time frame constitutes a waiver of any right such person has to request a hearing under Section 120.57, Florida Statutes.

The application is available for public inspection during normal business hours, 8:00 a.m. to 5:00 p.m., Monday through Friday, except for legal holidays, at:
Dept. of Environmental Regulation
Bureau of Air Quality Management
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

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

Any person may send written comments on the proposed action to Mr. Bill Thomas at the department's Tallahassee address. All comments mailed within 14 days of the publication of this notice will be considered in the Department's final determination.
I-094028—1T—9/20, 1988, Tuesday

CANTELOUP ASSOCIATES
CONSULTING ENGINEERS
SURVEYORS & PLANNERS

PM
9-16-88
Augusta, GA

RECEIVED
SEP 19 1988
DER-BAQM

September 16, 1988

Mr. Bill Thomas
Bureau of Air Quality Management
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, FL 32399-2400

RE: Permit #AC 05-151435
Sea Ray Boats, Inc.
Merritt Island, FL

Dear Mr. Thomas:

Please be advised that since this facility will not be operating at full capacity until after the end of the first year, this facility will be unable to comply with the specific conditions of the referenced permit.

We are requesting that we be allowed to submit, according to EPA Method 24, emissions rates using Material Safety Data Sheets and Usage Logs such as the one attached.

If you have any questions or care to discuss, please call at (803) 648-9300.

Yours truly,

G. E. Cantelou, Jr. P. E.

GEC:sc

Attachment

copied: Q. Reynolds
C. Collins, CF Dist
EHF/LST

1359 Silver Bluff Rd. Suite B-3 / P.O. Box 3102 / Aiken, S.C. 29802 / (803) 648-9300

USAGE LOG

NDING: _____

MONDAY		(1)	(2)	(3)	(4)	(5)	(6)
DESCRIPTION		DENSITY	VOC FACTOR	TIME FACTOR	AMOUNTS USED	TOTAL VOC EMISSIONS (5) = (1)X(2)X(4)/2000	HOURLY VOC EMISSIONS (6) = (1)X(2)X(4)/(3)
PRODUCT	COMPONENT	#/GAL	% BY WT	HRS/DAY	(GALS)	(TONS)	(#/HR)
RESIN	STYRENE	9.15	8	16			
GEL COAT	STYRENE	10.7	8	16			
	METHYL METHACRALATE	10.7	8	16			
MEKP	MEKP	8.0	10	16			
ADHESIVE	1,1,1-TRICHLORETHANE	10.5	66	16			
ACETONE	ACETONE	6.1	50	16			
BOTTOM PAINT	BOTTOM PAINT	11.4	60	16			

TOTAL DAILY EMISSIONS _____

TUESDAY		(1)	(2)	(3)	(4)	(5)	(6)
DESCRIPTION		DENSITY	VOC FACTOR	TIME FACTOR	AMOUNTS USED	TOTAL VOC EMISSIONS (5) = (1)X(2)X(4)/2000	HOURLY VOC EMISSIONS (6) = (1)X(2)X(4)/(3)
PRODUCT	COMPONENT	#/GAL	% BY WT	HRS/DAY	(GALS)	(TONS)	(#/HR)
RESIN	STYRENE	9.15	8	16			
GEL COAT	STYRENE	10.7	8	16			
	METHYL METHACRALATE	10.7	8	16			
MEKP	MEKP	8.0	10	16			
ADHESIVE	1,1,1-TRICHLORETHANE	10.5	66	16			
ACETONE	ACETONE	6.1	50	16			
BOTTOM PAINT	BOTTOM PAINT	11.4	60	16			

TOTAL DAILY EMISSIONS _____

WEDNESDAY		(1)	(2)	(3)	(4)	(5)	(6)
DESCRIPTION		DENSITY	VOC FACTOR	TIME FACTOR	AMOUNTS USED	TOTAL VOC EMISSIONS (5) = (1)X(2)X(4)/2000	HOURLY VOC EMISSIONS (6) = (1)X(2)X(4)/(3)
PRODUCT	COMPONENT	#/GAL	% BY WT	HRS/DAY	(GALS)	(TONS)	(#/HR)
RESIN	STYRENE	9.15	8	16			
GEL COAT	STYRENE	10.7	8	16			
	METHYL METHACRALATE	10.7	8	16			
MEKP	MEKP	8.0	10	16			
ADHESIVE	1,1,1-TRICHLORETHANE	10.5	66	16			
ACETONE	ACETONE	6.1	50	16			
BOTTOM PAINT	BOTTOM PAINT	11.4	60	16			

TOTAL DAILY EMISSIONS _____

THURSDAY		(1)	(2)	(3)	(4)	(5)	(6)
DESCRIPTION		DENSITY	VOC FACTOR	TIME FACTOR	AMOUNTS USED	TOTAL VOC EMISSIONS (5) = (1)X(2)X(4)/2000	HOURLY VOC EMISSIONS (6) = (1)X(2)X(4)/(3)
PRODUCT	COMPONENT	#/GAL	% BY WT	HRS/DAY	(GALS)	(TONS)	(#/HR)
RESIN	STYRENE	9.15	8	16			
GEL COAT	STYRENE	10.7	8	16			
	METHYL METHACRALATE	10.7	8	16			
MEKP	MEKP	8.0	10	16			
ADHESIVE	1,1,1-TRICHLORETHANE	10.5	66	16			
ACETONE	ACETONE	6.1	50	16			
BOTTOM PAINT	BOTTOM PAINT	11.4	60	16			

TOTAL DAILY EMISSIONS _____

FRIDAY		(1)	(2)	(3)	(4)	(5)	(6)
DESCRIPTION		DENSITY	VOC FACTOR	TIME FACTOR	AMOUNTS USED	TOTAL VOC EMISSIONS (5) = (1)X(2)X(4)/2000	HOURLY VOC EMISSIONS (6) = (1)X(2)X(4)/(3)
PRODUCT	COMPONENT	#/GAL	% BY WT	HRS/DAY	(GALS)	(TONS)	(#/HR)
RESIN	STYRENE	9.15	8	16			
GEL COAT	STYRENE	10.7	8	16			
	METHYL METHACRALATE	10.7	8	16			
MEKP	MEKP	8.0	10	16			
ADHESIVE	1,1,1-TRICHLORETHANE	10.5	66	16			
ACETONE	ACETONE	6.1	50	16			
BOTTOM PAINT	BOTTOM PAINT	11.4	60	16			

TOTAL DAILY EMISSIONS _____

TOTAL WEEKLY EMISSIONS _____

App. Rec'd 6/30
TEPD Mailed 9/

APPLICATION TRACKING SYSTEM 06/30/88

APPL NO:151435
APPL RECVD:06/30/88 TYPE CODE:AC SUBCODE:05 LAST UPDATE:06/30/88
DER OFFICE RECVD:ORL DER OFFICE TRANSFER TO:___ APPLICATION COMPLETE:__/__/__
DER PROCESSOR:J TURNER
APPL STATUS:AC DATE:06/30/88 (ACTIVE/DENIED/WITHDRAWN/EXEMPT/ISSUED/GENERAL)
RELIEF:__ (SSAC/EXEMPTIONS/VARIANCE)
(Y/N) N MANUAL TRACKING DISTRICT:30 COUNTY:05
(Y/N) N DNR REVIEW REQD? LAT/LONG:28.24.26/80.42.03
(Y/N) N PUBLIC NOTICE REQD? BASIN-SEGMENT:__.___
(Y/N) N GOV BODY LOCAL APPROVAL REQD? COE #:_____
(Y/N) Y LETTER OF INTENT REQD? _ (I/ISSUE D/DENY) ALT#:___-_____

PROJECT SOURCE NAME:SEA RAY BOATS/LAMINATION & ASSEMBLY
STREET:SEA RAY DRIVE CITY:MERRITT ISLAND
STATE:FL ZIP:_____ PHONE:___-___-____
APPLICATION NAME:CANTELOU ASSOCIATES, INC.
STREET:POST OFFICE BOX 3102 CITY:AIKEN
STATE:SC ZIP:29802 PHONE:803-648-9300
AGENT NAME:_____
STREET:_____ CITY:_____
STATE:__ ZIP:_____ PHONE:___-___-____
FEE #1 DATE PAID:06/30/88 AMOUNT PAID:00750 RECEIPT NUMBER:00124304

B DATE APPLICANT INFORMED OF NEED FOR PUBLIC NOTICE - - - __/__/__
C DATE DER SENT DNR APPLICATION/SENT DNR INTENT - - - - - __/__/__--__/__/__
D DATE DER REQ. COMMENTS FROM GOV. BODY FOR LOCAL APP. -. __/__/__
E DATE #1 ADDITIONAL INFO REQ--REC FROM APPLICANT - - - - __/__/__--__/__/__
E DATE #2 ADDITIONAL INFO REQ--REC FROM APPLICANT - - - - __/__/__--__/__/__
E DATE #3 ADDITIONAL INFO REQ--REC FROM APPLICANT - - - - __/__/__--__/__/__
E DATE #4 ADDITIONAL INFO REQ--REC FROM APPLICANT - - - - __/__/__--__/__/__
E DATE #5 ADDITIONAL INFO REQ--REC FROM APPLICANT - - - - __/__/__--__/__/__
E DATE #6 ADDITIONAL INFO REQ--REC FROM APPLICANT - - - - __/__/__--__/__/__
F DATE GOVERNING BODY REQUESTED SURVEY RESULTS/REPORTS - - __/__/__
G DATE FIELD REPORT WAS REQ--REC - - - - - - - - - - - - __/__/__--__/__/__
H DATE DNR REVIEW WAS COMPLETED - - - - - - - - - - - - __/__/__

I DATE APPLICATION WAS COMPLETE - - - - - - - - - - - - __/__/__
J DATE GOVERNING BODY PROVIDED COMMENTS OR OBJECTIONS - - __/__/__
K DATE NOTICE OF INTENT WAS SENT--REC TO APPLICANT - - - - __/__/__--__/__/__
L DATE PUBLIC NOTICE WAS SENT TO APPLICANT - - - - - - - - __/__/__
M DATE PROOF OF PUBLICATION OF PUBLIC NOTICE RECEIVED - - __/__/__
N WAIVER DATE BEGIN--END (DAY 90) - - - - - - - - - - - - __/__/__--__/__/__

COMMENTS: 1.
2.
3.

AC 05-151435

DEPARTMENT OF ENVIRONMENTAL REGULATION

CENTRAL FLORIDA DISTRICT
3319 MAGUIRE BOULEVARD
SUITE 232
ORLANDO, FLORIDA 32803-3767

BOB MARTINEZ
GOVERNOR
DALE TWACHTMANN
SECRETARY
ALEX ALEXANDER
DISTRICT MANAGER

APPLICATION TO OPERATE/CONSTRUCT AIR POLLUTION SOURCES

SOURCE TYPE: Fiberglass Boat Plant [X] New[1] [ ] Existing[1]

APPLICATION TYPE: [X] Construction [ ] Operation [ ] Modification

COMPANY NAME: Sea Ray Boats, Inc. COUNTY: Brevard

Identify the specific emission point source(s) addressed in this application (i.e. Lime Kiln No. 4 with Venturi Scrubber; Peaking Unit No. 2, Gas Fired) Lamination & Assembly Building

SOURCE LOCATION: Street Sea Ray Drive City Merritt Island

UTM: East Zone 17 - 529.300 E North 3,142.100 N

Latitude 28 ° 24 ' 26 "N Longitude 80 ° 42 ' 03 "W

APPLICANT NAME AND TITLE: Cantelou Associates, Inc.

APPLICANT ADDRESS: P. O. Box 3102, Aiken, S. C., 29802

SECTION I: STATEMENTS BY APPLICANT AND ENGINEER

A. APPLICANT

I am the undersigned owner or authorized representative* of Sea Ray Boats, Inc. Sykes Creek Plant

I certify that the statements made in this application for a Boat Manuf.Plant permit are true, correct and complete to the best of my knowledge and belief. Further I agree to maintain and operate the pollution control source and pollution contro facilities in such a manner as to comply with the provision of Chapter 403, Florid Statutes, and all the rules and regulations of the department and revisions thereof. also understand that a permit, if granted by the department, will be non-transferabl and I will promptly notify the department upon sale or legal transfer of the permitte establishment.

*Attach letter of authorization

Signed:

G. E. Cantelou, Jr. P.E.
Name and Title (Please Type)

Date: 6-28-88 Telephone No. 803-648-9300

B. PROFESSIONAL ENGINEER REGISTERED IN FLORIDA (where required by Chapter 471, F.S.)

This is to certify that the engineering features of this pollution control project hav been designed/examined by me and found to be in conformity with modern engineerin principles applicable to the treatment and disposal of pollutants characterized in th permit application. There is reasonable assurance, in my professional judgment, tha

[1] See Florida Administrative Code Rule 17-2.100(57) and (104)

the pollution control facilities, when properly maintained and operated, will discharge an effluent that complies with all applicable statutes of the State of Florida and the rules and regulations of the department. It is also agreed that the undersigned will furnish, if authorized by the owner, the applicant a set of instructions for the proper maintenance and operation of the pollution control facilities and, if applicable, pollution sources.

Signed _____

C. E. Cantelou, Jr. P. E.
Name (Please Type)

Cantelou Associates, Inc.
Company Name (Please Type)

P. O. Box 3102, Aiken, S. C. 29802
Mailing Address (Please Type)

Florida Registration No. 18006 Date: June 28,1988 Telephone No. 803/648-9300

SECTION II: GENERAL PROJECT INFORMATION

A. Describe the nature and extent of the project. Refer to pollution control equipment, and expected improvements in source performance as a result of installation. State whether the project will result in full compliance. Attach additional sheet if necessary.

The proposed facility will produce fiberglass pleasure boats. The complete procedure is described in detail under Section V: Supplemental Requirements Article 7.

B. Schedule of project covered in this application (Construction Permit Application Only)

Start of Construction August 1, 1988 Completion of Construction March 30, 1989

C. Costs of pollution control system(s): (Note: Show breakdown of estimated costs only for individual components/units of the project serving pollution control purposes. Information on actual costs shall be furnished with the application for operation permit.)

Dust Collection System - $120,000 (approximately)

D. Indicate any previous DER permits, orders and notices associated with the emission point, including permit issuance and expiration dates.

Permit Number A051-322579

3840

E. Requested permitted equipment operating time: hrs/day 16 ; days/wk 5 ; wks/yr 48 ;

if power plant, hrs/yr_____; if seasonal, describe: Does Not Apply

F. If this is a new source or major modification, answer the following questions. (Yes or No)

1. Is this source in a non-attainment area for a particular pollutant? No

   a. If yes, has "offset" been applied? _____

   b. If yes, has "Lowest Achievable Emission Rate" been applied? _____

   c. If yes, list *non-attainment* pollutants. _____

2. Does best available control technology (BACT) apply to this source? If yes, see Section VI. No

3. Does the State "Prevention of Significant Deterioriation" (PSD) requirement apply to this source? If yes, see Sections VI and VII. No

4. Do "Standards of Performance for New Stationary Sources" (NSPS) apply to this source? No

5. Do "National Emission Standards for Hazardous Air Pollutants" (NESHAP) apply to this source? No

H. Do "Reasonably Available Control Technology" (RACT) requirements apply to this source? No

   a. If yes, for what pollutants? _____

   b. If yes, in addition to the information required in this form, any information requested in Rule 17-2.650 must be submitted.

Attach all supportive information related to any answer of "Yes". Attach any justification for any answer of "No" that might be considered questionable.

SECTION III: AIR POLLUTION SOURCES & CONTROL DEVICES (Other than Incinerators)

A. Raw Materials and Chemicals Used in your Process, if applicable:

Description	Contaminants Type	Contaminants % Wt	Utilization Rate - lbs/hr	Relate to Flow Diagram
Resin	Styrene	40	323.	Step 2
Gelcoat	Styrene	35	{ 49.5 }	Step 1
Gelcoat	Methyl Methacralate	5	{ }	Step 1
MEKP9	MEKP	34	4.7	Steps 1,2
Glue(adhesive)	1,1,1-Tri-chloroethane	34	3.5	Step 4
Acetone	Acetone	99	12.5	Steps1,1,5
Bottom Paint	*1 Misc.	43	11.7	Step 5 (outside)

B. Process Rate, if applicable: (See Section V, Item 1)

1. Total Process Input Rate (lbs/hr): _____

2. Product Weight (lbs/hr): _____

C. Airborne Contaminants Emitted: (Information in this table must be submitted for each emission point, use additional sheets as necessary)

× .39 ? = 22.3 ?

Name of Contaminant	Emission[1] Maximum lbs/hr	Emission[1] Actual T/yr	Allowed Emission[2] Rate per Rule 17-2	Allowable[3] Emission lbs/hr	Potential[4] Emission lbs/yr	Potential[4] Emission T/yr	Relate to Flow Diagram
Styrene	29.8	57.2	Not Determined		260,000	130.0	Step 1,2
Methyl Methacralate	3.96	7.6	Not Determined		34,600	17.3	Step 1
MEKP	0.47	0.9	Not Determined		4,000	2.0	Step 1,2
1,1,1-Tri-chloroethane	2.31	4.4	Not Determined		20,100	10.1	Step 4
Acetone	6.25	12.	Not Determined		54,600	27.3	Step 1,2,5
*1 Misc.	7 / 49.79	13.4 / 95.5	Not Determined		61,000	30.5 / 217.2	Step 3,4,5

[1]See Section V, Item 2.

[2]Reference applicable emission standards and units (e.g. Rule 17-2.600(5)(b)2. Table II, E. (1) - 0.1 pounds per million BTU heat input)

[3]Calculated from operating rate and applicable standard.

[4]Emission, if source operated without control (See Section V, Item 3).

D. Control Devices: (See Section V, Item 4)

Name and Type (Model & Serial No.)	Contaminant	Efficiency	Range of Particles Size Collected (in microns) (If applicable)	Basis for Efficiency (Section V Item 5)
Dust Collector Mfg., Not Determined	SawDust(Wood)	±99%	(Not Vented)	

E. Fuels

Type (Be Specific)	Consumption*		Maximum Heat Input (MMBTU/hr)
	avg/hr	max./hr	

*Units: Natural Gas--MMCF/hr; Fuel Oils--gallons/hr; Coal, wood, refuse, other--lbs/hr.

Fuel Analysis:

Percent Sulfur: _____ Percent Ash: _____

Density: _____ lbs/gal Typical Percent Nitrogen: _____

Heat Capacity: _____ BTU/lb _____ BTU/gal

Other Fuel Contaminants (which may cause air pollution): _____

F. If applicable, indicate the percent of fuel used for space heating.

Annual Average _____ Maximum _____

G. Indicate liquid or solid wastes generated and method of disposal.

Contaminated acetone is recycled by licensed handler off-site

Solid waste generated is non-toxic and non-hazardous and is disposed

of offsite (incinerated)

H. Emission Stack Geometry and Flow Characteristics (Provide data for each stack):

Stack Height: DOES NOT APPLY ft. Stack Diameter: _____ ft.

Gas Flow Rate: _____ ACFM _____ DSCFM Gas Exit Temperature: _____ °F.

Water Vapor Content: _____ % Velocity: _____ FPS

SECTION IV: INCINERATOR INFORMATION DOES NOT APPLY

Type of Waste	Type 0 (Plastics)	Type I (Rubbish)	Type II (Refuse)	Type III (Garbage)	Type IV (Pathological)	Type V (Liq.& Gas By-prod.)	Type VI (Solid By-prod.)
Actual lb/hr Incinerated							
Uncontrolled (lbs/hr)							

Description of Waste _____

Total Weight Incinerated (lbs/hr) _____ Design Capacity (lbs/hr) _____

Approximate Number of Hours of Operation per day _____ day/wk _____ wks/yr. _____

Manufacturer _____

Date Constructed _____ Model No. _____

	Volume $(ft)^3$	Heat Release (BTU/hr)	Fuel		Temperature (°F)
			Type	BTU/hr	
Primary Chamber					
Secondary Chamber					

Stack Height: _____ ft. Stack Diamter: _____ Stack Temp. _____

Gas Flow Rate: _____ ACFM _____ DSCFM* Velocity: _____ FPS

*If 50 or more tons per day design capacity, submit the emissions rate in grains per standard cubic foot dry gas corrected to 50% excess air.

Type of pollution control device: [ ] Cyclone [ ] Wet Scrubber [ ] Afterburner

[ ] Other (specify) _____

Brief description of operating characteristics of control devices: _____

_____

_____

_____

_____

Ultimate disposal of any effluent other than that emitted from the stack (scrubber water, ash, etc.):

_____

_____

_____

_____

NOTE: Items 2, 3, 4, 6, 7, 8, and 10 in Section V must be included where applicable.

SECTION V: SUPPLEMENTAL REQUIREMENTS *See Attachment I

Please provide the following supplements where required for this application.

1. Total process input rate and product weight -- show derivation [Rule 17-2.100(127)]

2. To a construction application, attach basis of emission estimate (e.g., design calculations, design drawings, pertinent manufacturer's test data, etc.) and attach proposed methods (e.g., FR Part 60 Methods 1, 2, 3, 4, 5) to show proof of compliance with applicable standards. To an operation application, attach test results or methods used to show proof of compliance. Information provided when applying for an operation permit from a construction permit shall be indicative of the time at which the test was made.

3. Attach basis of potential discharge (e.g., emission factor, that is, AP42 test).

4. With construction permit application, include design details for all air pollution control systems (e.g., for baghouse include cloth to air ratio; for scrubber include cross-section sketch, design pressure drop, etc.)

5. With construction permit application, attach derivation of control device(s) efficiency. Include test or design data. Items 2, 3 and 5 should be consistent: actual emissions = potential (1-efficiency).

6. An 8 1/2" x 11" flow diagram which will, without revealing trade secrets, identify the individual operations and/or processes. Indicate where raw materials enter, where solid and liquid waste exit, where gaseous emissions and/or airborne particles are evolved and where finished products are obtained.

7. An 8 1/2" x 11" plot plan showing the location of the establishment, and points of airborne emissions, in relation to the surrounding area, residences and other permanent structures and roadways (Example: Copy of relevant portion of USGS topographic map).

8. An 8 1/2" x 11" plot plan of facility showing the location of manufacturing processes and outlets for airborne emissions. Relate all flows to the flow diagram.

9. The appropriate application fee in accordance with Rule 17-4.05. The check should be made payable to the Department of Environmental Regulation.

10. With an application for operation permit, attach a Certificate of Completion of Construction indicating that the source was constructed as shown in the construction permit.

SECTION VI: BEST AVAILABLE CONTROL TECHNOLOGY

A. Are standards of performance for new stationary sources pursuant to 40 C.F.R. Part 60 applicable to the source?

[ ] Yes [ ] No

Contaminant	Rate or Concentration

B. Has EPA declared the best available control technology for this class of sources (If yes, attach copy)

[ ] Yes [ ] No

Contaminant	Rate or Concentration

C. What emission levels do you propose as best available control technology?

Contaminant	Rate or Concentration

D. Describe the existing control and treatment technology (if any).

1. Control Device/System:
2. Operating Principles:
3. Efficiency:*
4. Capital Costs:

*Explain method of determining

5. Useful Life:

6. Operating Costs:

7. Energy:

8. Maintenance Cost:

9. Emissions:

Contaminant	Rate or Concentration

10. Stack Parameters

a. Height: ft.

b. Diameter: ft.

c. Flow Rate: ACFM

d. Temperature: °F.

e. Velocity: FPS

E. Describe the control and treatment technology available (As many types as applicable, use additional pages if necessary).

1.

a. Control Device:

b. Operating Principles:

c. Efficiency:[1]

d. Capital Cost:

e. Useful Life:

f. Operating Cost:

g. Energy:[2]

h. Maintenance Cost:

i. Availability of construction materials and process chemicals:

j. Applicability to manufacturing processes:

k. Ability to construct with control device, install in available space, and operate within proposed levels:

2.

a. Control Device:

b. Operating Principles:

c. Efficiency:[1]

d. Capital Cost:

e. Useful Life:

f. Operating Cost:

g. Energy:[2]

h. Maintenance Cost:

i. Availability of construction materials and process chemicals:

[1]Explain method of determining efficiency.
[2]Energy to be reported in units of electrical power - KWH design rate.

j. Applicability to manufacturing processes:

k. Ability to construct with control device, install in available space, and operate within proposed levels:

3.

a. Control Device:

b. Operating Principles:

c. Efficiency:[1]

d. Capital Cost:

e. Useful Life:

f. Operating Cost:

g. Energy:[2]

h. Maintenance Cost:

i. Availability of construction materials and process chemicals:

j. Applicability to manufacturing processes:

k. Ability to construct with control device, install in available space, and operate within proposed levels:

4.

a. Control Device:

b. Operating Principles:

c. Efficiency:[1]

d. Capital Costs:

e. Useful Life:

f. Operating Cost:

g. Energy:[2]

h. Maintenance Cost:

i. Availability of construction materials and process chemicals:

j. Applicability to manufacturing processes:

k. Ability to construct with control device, install in available space, and operate within proposed levels:

F. Describe the control technology selected:

1. Control Device:

2. Efficiency:[1]

3. Capital Cost:

4. Useful Life:

5. Operating Cost:

6. Energy:[2]

7. Maintenance Cost:

8. Manufacturer:

9. Other locations where employed on similar processes:

a. (1) Company:

(2) Mailing Address:

(3) City:

(4) State:

[1]Explain method of determining efficiency.
[2]Energy to be reported in units of electrical power - KWH design rate.

(5) Environmental Manager:

(6) Telephone No.:

(7) Emissions:[1]

Contaminant	Rate or Concentration

(8) Process Rate:[1]

b. (1) Company:

(2) Mailing Address:

(3) City: (4) State:

(5) Environmental Manager:

(6) Telephone No.:

(7) Emissions:[1]

Contaminant	Rate or Concentration

(8) Process Rate:[1]

10. Reason for selection and description of systems:

[1]Applicant must provide this information when available. Should this information not be available, applicant must state the reason(s) why.

SECTION VII - PREVENTION OF SIGNIFICANT DETERIORATION DOES NOT APPLY

A. Company Monitored Data

1. _____no. sites _____ TSP _____( ) SO^2* _____ Wind spd/dir

Period of Monitoring _____/_____/_____ to _____/_____/_____
month day year month day year

Other data recorded _____

Attach all data or statistical summaries to this application.

*Specify bubbler (B) or continuous (C).

2. Instrumentation, Field and Laboratory

a. Was instrumentation EPA referenced or its equivalent? [ ] Yes [ ] No

b. Was instrumentation calibrated in accordance with Department procedures?

[ ] Yes [ ] No [ ] Unknown

B. Meteorological Data Used for Air Quality Modeling

1. _____ Year(s) of data from ____/____/____ to ____/____/____
month day year month day year

2. Surface data obtained from (location)_____

3. Upper air (mixing height) data obtained from (location)_____

4. Stability wind rose (STAR) data obtained from (location)_____

C. Computer Models Used

1. _____ Modified? If yes, attach description.

2. _____ Modified? If yes, attach description.

3. _____ Modified? If yes, attach description.

4. _____ Modified? If yes, attach description.

Attach copies of all final model runs showing input data, receptor locations, and principle output tables.

D. Applicants Maximum Allowable Emission Data

Pollutant	Emission Rate
TSP	_____ grams/sec
SO^2	_____ grams/sec

E. Emission Data Used in Modeling

Attach list of emission sources. Emission data required is source name, description of point source (on NEDS point number), UTM coordinates, stack data, allowable emissions, and normal operating time.

F. Attach all other information supportive to the PSD review.

G. Discuss the social and economic impact of the selected technology versus other applicable technologies (i.e., jobs, payroll, production, taxes, energy, etc.). Include assessment of the environmental impact of the sources.

H. Attach scientific, engineering, and technical material, reports, publications, journals, and other competent relevant information describing the theory and application of the requested best available control technology.

ATTACHMENT I

SECTION V: SUPPLEMENTAL REQUIREMENTS

1. Not required.

2. See Attachment II.

3. Attached see Exhibit "A", Part 1 - excerpt from Cal-OSHA study indicating the emmission factor for styrene from resins is 6%, Part 2 - Product data sheets.

4. Dust collector not vented to atmosphere.

5. Dust Collector not vented efficiency = 100%

6. See Exhibit "B".

7. See Exhibit "C".

8. See Exhibit "D".

9. $750 permit fee.

10. Not required.

UTILIZATION RATE:

RESIN

$$\frac{1{,}240{,}000 \text{ lbs/year}}{48 \frac{\text{wks}}{\text{yr}} \times 5 \frac{\text{days}}{\text{wk}} \times 16 \frac{\text{hrs}}{\text{day}}} = 323 \text{ lbs/hr.}$$

GELCOAT

$$\frac{190{,}000 \text{ lbs/year}}{48 \frac{\text{wks}}{\text{yr}} \times 5 \frac{\text{days}}{\text{wk}} \times 16 \frac{\text{hrs}}{\text{day}}} = 49.5 \text{ lbs/hr.}$$

MEKP-9

$$\frac{18{,}000 \text{ lbs/year}}{48 \frac{\text{wks}}{\text{yr}} \times 5 \frac{\text{days}}{\text{wk}} \times 16 \frac{\text{hrs}}{\text{day}}} = 4.7 \text{ lbs/hr.}$$

GLUE (Adhesive)

$$\frac{13{,}110 \text{ lbs/yr.}}{48 \frac{\text{wks}}{\text{yr}} \times 5 \frac{\text{days}}{\text{wk}} \times 16 \frac{\text{hrs}}{\text{day}}} = 3.5 \text{ lbs/hr.}$$

ACETONE

$$\frac{48{,}000 \text{ lbs/yr.}}{48 \frac{\text{wks}}{\text{yr}} \times 5 \frac{\text{days}}{\text{wk}} \times 16 \frac{\text{hrs}}{\text{day}}} = 12.5 \text{ lbs/hr.}$$

BOTTOM PAINT

$$\frac{45{,}000 \text{ lbs/yr.}}{48 \frac{\text{wks}}{\text{yr}} \times 5 \frac{\text{days}}{\text{wk}} \times 16 \frac{\text{hrs}}{\text{day}}} = 11.7 \text{ lbs/hr.}$$

EMISSIONS:

7.17 4.46

Styrene (Emissions rate)(utilization rate) = emissions

(.06)(323)(.37) + (.30)(49.5)(.30) = 11.63

(.08)(323 lbs/hr) + (.08)(49.5) = 29.80 lbs/hr

resin ↑ glycol ↑

Methyl Methacralate .05 (49.5) = 2.48

(.08)(49.5 lbs/hr) = 3.96 lbs/hr

MEKP (.10)(4.7 lbs/hr) = 0.47 lbs/hr

↳ ESTIMATED

1,1,1-Trichloroethane .60 (.66)(3.5 lbs/hr) = 2.1 2.31 lbs/hr *

Acetone (.50)(12.5 lbs/hr) = 6.25 lbs/hr

Bottom Paint *MISC (.60)(11.7 lbs/hr) = 7.02 lbs/hr

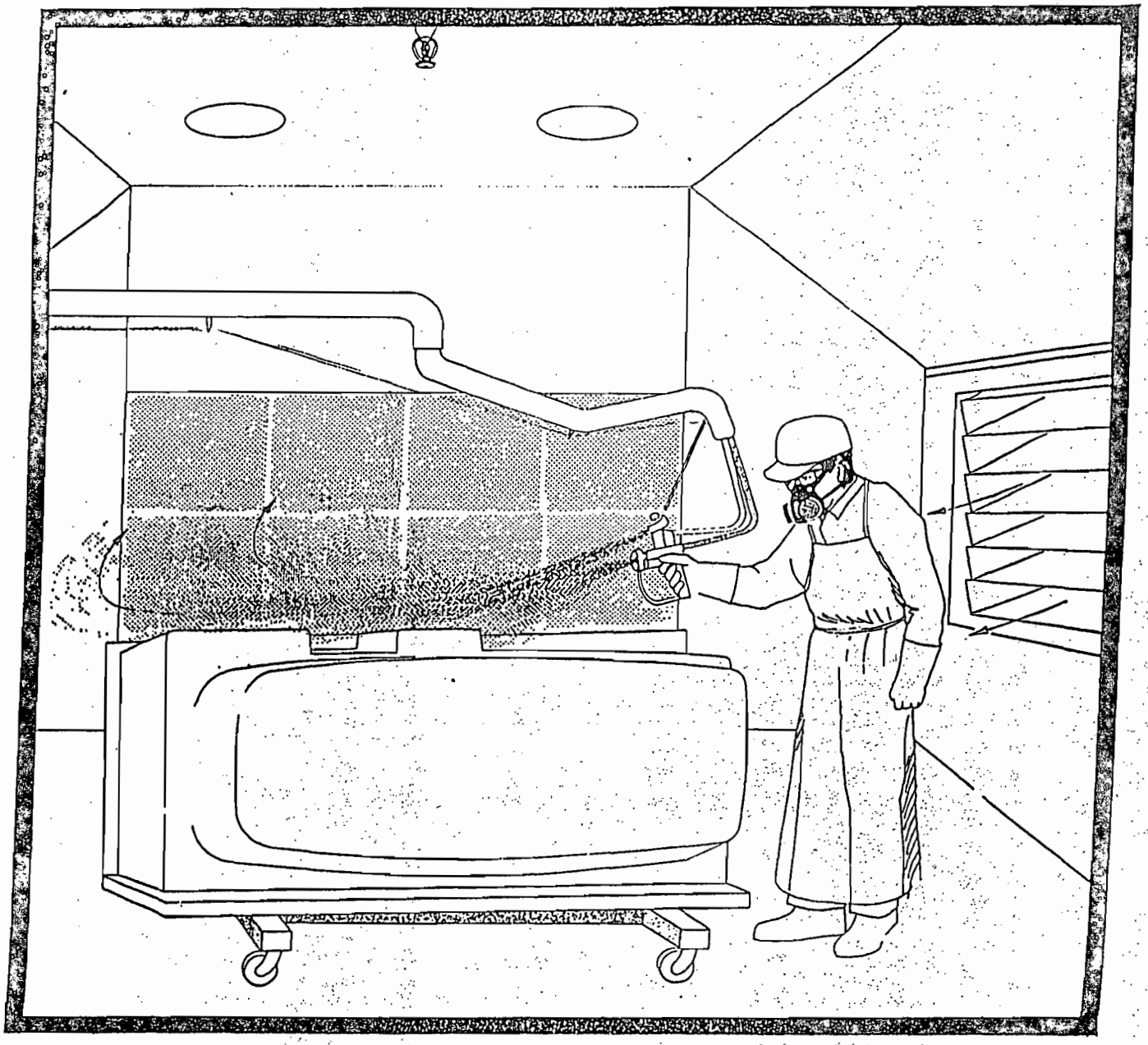
PARTICULATE MATTER ?
FROM WOODWORKING

* REPORTING NOT REQUIRED

EXHIBIT "A"
PART I

Occupational Exposures to Styrene
and Other Health Hazards in the Fiberglass Reinforced Plastics Industry

A Special Studies Report by CAL OSHA



Department of Industrial Relations DIR
State of California
George Deukmejian, Governor
Ron Rinaldi, Director of Industrial Relations

worker performed almost continuous spraying while standing on a portable platform that was inserted into the tank that also supported a large duct with high velocity airflow that exhausted vapors very close to the point of generation.

Two facilities, using a unique production process to ensure good secondary bonding between resin layers, also had the side effect of obtaining low ambient exposure levels from the process. After gelcoating and hand laminating the mold, the part was covered with plastic sheeting and a vacuum pulled while the part is curing. Covering the part and pulling a vacuum through the space between the part and the plastic, removes styrene vapor from the work place air and reduces employee exposure.

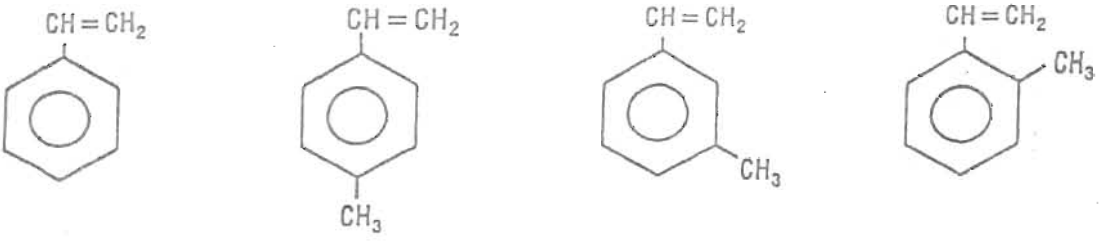
The majority of companies which installed some form of dilution ventilation, for example, filter banks on the walls that pull a large volume of air, were mostly ineffective. They were either too far from the source of the exposure or were defeated by lack of directionality and turbulence.

Substitution

NIOSH estimates that approximately 6% of styrene monomer in a 40/60 polyester resin mixture vaporizes during the curing process. Methyl styrene (also called vinyl toluene) is a close chemical cousin of styrene that has a lower vapor pressure, reducing the amount of vaporization. Methyl styrene has three isomers, para, meta, or the ortho form. Two production facilities were using a resin mixture containing 60% polyester, 14% styrene and 26% para-methyl styrene.

FIGURE V.3

Styrene and the Three Isomers of Methyl Styrene



STYRENE | Para methyl styrene | Meta methyl styrene | Ortho methyl styrene

EXHIBIT "A"
PART 2

Material Safety Data Sheet

Manufacturer's Name	Alpha Resins Corporation	Emergency Telephone No.	(813) 858-4431
Address	4620 N. Calloway Road Lakeland, Florida 33805	Other Information Calls	(813) 858-4431
Signature of Person Responsible for Preparation	Pete Peterson	Date Prepared	Dec. 31, 1987

SECTION 1 - IDENTITY

Common Name: (used on label) (Trade Name & Synonyms)	80-530	Cas No.	Mixture
Chemical Name	Unsaturated Polyester Resin	Chemical Family	Diacid/Glycol Condensate
Formula	Mixture		

SECTION 2 - HAZARDOUS INGREDIENTS

Principal Hazardous Components (chemical & common names)	%	OSHA PEL
STYRENE (100-42-5)	39	100ppm

SECTION 3 - PHYSICAL & CHEMICAL CHARACTERISTICS (Fire & Explosion Data)

Boiling Point	293°F			Specific Gravity (H_2O=1)	1.0 - 1.1	Vapor Pressure (mm Hg)	< 4.5
Percent Volatile by Volume (%)	39	Vapor Density (Air = 1)	3.6	Evaporation Rate (Bu Ac=1)	3.1		
Solubility in Water	Very slight			Reactivity in Water	None		
Appearance and Odor	Viscous liquid with sweet pungent odor.						
Flash Point		Flammable Limits in Air % by Volume	Lower 1.1	Upper 6.1	Extinguisher Media	Water fog, foam Dry chem., CO_2	Auto-Ignition Temperature
Special Fire Fighting Procedures	If electrical equipment is involved, the use of foam should be avoided. Handling equipment should be cooled by water stream if exposed to fire.						
Unusual Fire and Explosion Hazards	At elevated temperatures, such as in a fire condition, polymerization may take place resulting in violent rupture of closed containers. Wear positive pressure apparatus, eye protection, and keep vapors away from possible ignition sources.						

SECTION 4 - PHYSICAL HAZARDS

Stability	Unstable ☐ Stable ☒	Conditions to Avoid	Sunlight, open flames, contamination, and prolonged storage above 75° F
Incompatability (Materials to Avoid)	Acids, oxidizing agents, free radical initiators such as peroxides, and metallic halides and soaps.		
Hazardous Decomposition Products	Carbon monoxide, carbon dioxide and low molecular weight hydrocarbons.		
Hazardous Polymerization	May Occur ☒ Will Not Occur ☐	Conditions to Avoid	Open flames, contamination and prolonged exposure to sunlight or temperatures greater than 75° F

SECTION 5 - HEALTH HAZARDS

Signs and Symptoms of Exposure — 1. Acute Overexposure: May irritate eyes, nose, throat, and skin.

2. Chronic Overexposure: May feel drugged, become sleepy, or unconscious. Repeated skin contact may cause rash.

Medical Conditions Generally Aggravated by Exposure: Pre-existing respiratory and skin disorders

Chemical Listed as Carcinogen or Potential Carcinogen		National Toxicology Program	Yes ☐ No ☒	I.A.R.C. Monographs	Yes ☐ No ☒	OSHA	Yes ☐ No ☒
OSHA Permissible Exposure Limit	100ppm	ACGIH Threshold Limit Value	50ppm	Other Exposure Limit Used	STEL=100ppm		

Emergency and First Aid Procedures

PRIMARY ROUTES OF ENTRY

1. Inhalation: Move exposed person(s) to fresh air. Get medical attention.

2. Eyes: Contact lens should not be worn while working with this material. Immediately flush with plenty of water for at least 15 minutes. Get prompt medical attention.

3. Skin: Wash exposed skin with soap and water. Get medical attention if irritation develops. Remove contaminated clothing, shoes, and thoroughly clean before reuse.

4. Ingestion: DO NOT induce vomiting. Call physician immediately.

SECTION 6 - SPECIAL PROTECTION INFORMATION

Respiratory Protection (Specify Type): Chemical cartridge respirator with NIOSH/OSHA approved organic vapor cartridge to 400ppm. Above 400ppm SCBA.

Ventilation	Local Exhaust	Mechanical (General)	Special	Other
	Preferred	Acceptable	Explosion proof	N/A

Protective Gloves: Rubber or other resistant material — Eye Protection: Chemical goggles

Other Protective Clothing or Equipment: Chemical resistant aprons or coats to avoid skin contact.

SECTION 7 - SPECIAL PRECAUTIONS AND SPILL/LEAK PROCEDURES

Precautions to be Taken in Handling and Storage: Store in an area below 75° F and out of direct sunlight. Keep from heat, spark, and smoking areas. Empty containers may be hazardous.

Other Precautions: Do not transfer to bottles or unlabeled containers. Equipment should be grounded during transfer with non-sparking pumps used.

Steps to be Taken in Case Material is Released or Spilled: Remove all sources of ignition. Ventilate area. Prevent material from entering drains. Absorbent should be vermicalite, dry sand or earth.

Waste Disposal Methods: Small spill - Soak up with absorbent and scoop into drums.

Large spill - Dike and pump into drums. Dispose of in accordance with local state and federal regulations.

IMPORTANT

Do not leave any blank spaces. If required information is unavailable, unknown, or does not apply, so indicate.

Orig. Book 1981

MATERIAL SAFETY DATA SHEET

SECTION I - MANUFACTURERS INFORMATION

'RODUCT CODE IDENTITY: 944WA62 330
IAME : COOK PAINT AND VARNISH COMPANY
DDRESS: P.O. BOX 419389
KANSAS CITY, MO 64141-6389

PRODUCT NAME: WHITE Gel Coat
DATE OF MSDS: 01/15/88

EMERGENCY TELEPHONE: 816-391-6000
INFORMATION TELEPHONE: 816-391-6003

ATTN: SAFETY AND HEALTH OFFICER
SEA RAY BOATS-KNX
2601 SEA RAY BLVD
KNOXVILLE TN 37914

CUSTOMER NUMBER: 285455
DATE PRINTED: 04/25/88

SECTION II - HAZARDOUS INGREDIENTS

TYRENE MONOMER

CAS #: 100-42-5 PERCENT: 35.000 VAPOR PRESSURE: 4.5 (MMHG/DEG F)

EXPOSURE LIMIT:
ACGIH TLV/TWA: 50 PPM (SKIN) (215 MG/CU.M.)
ACGIH TLV/STEL: 100 PPM (SKIN) (425 MG/CU.M.)
OSHA PEL: 100 PPM (425 MG/CU.M.)
OSHA PEL/CEILING: 200 PPM (850 MG/CU.M.)
OTHER: OSHA: 600 PPM/5 MIN/3 HR PEAK

ITANIUM DIOXIDE
EE ACGIH TLV BOOKLET, APPENDIX D

CAS #: 13463-67-7 PERCENT: 15.000 VAPOR PRESSURE: N/A (MMHG/DEG F)

EXPOSURE LIMIT:
ACGIH TLV/TWA: 10MG/CU.M. AS DUST, 5MG/CU.M. AS FUMES
OSHA PEL: 15MG/CU.M.

ILICA, AMORPHOUS

CAS #: 7631-86-9 PERCENT: LESS THAN 5 VAPOR PRESSURE: N/A (MMHG/DEG F)

EXPOSURE LIMIT:
ACGIH TLV/TWA: 10MG/CU.M. TOTAL DUST
OSHA PEL: 20M PPCF AS DUST

ALC (HYDROUS MAGNESIUM SILICATE)

CAS #: 14807-96-6 PERCENT: 10.000 VAPOR PRESSURE: N/A (MMHG/DEG F)

EXPOSURE LIMIT:
ACGIH TLV/TWA: 2 MG/M3 RESPIRABLE DUST
OSHA PEL: 20 M PPCF

ETHYL METHACRYLATE

CAS #: 80-62-6 PERCENT: 5.000 VAPOR PRESSURE: 29.0 (MMHG/DEG F)

EXPOSURE LIMIT:
ACGIH TLV/TWA: 100 PPM (410 MG/CU.M.)
ACGIH TLV/STEL: 125 PPM (510 MG/CU.M.)
OSHA PEL: 100 PPM (410 MG/CU.M.)

AXIMUM VOC NOT CONSUMED DURING CURING IS 40 GRAM/LITER (OR 230 GRAMS/SQUARE ETER OF SURFACE AREA OPEN TO AIR). MAXIMUM VOC OF UNCATALYZED RESINS AND GEL OATS IS 600 GRAMS/LITER.

Replaces Gel & opter

MATERIAL SAFETY DATA SHEET

RODUCT CODE IDENTITY: 944WA62 330 PRODUCT NAME: WHITE

SECTION III - HEALTH HAZARD DATA

FFECTS OF OVEREXPOSURE TO PRODUCT. PRIMARY ROUTES OF ENTRY ARE:

EYE CONTACT: IRRITATION. SYMPTOMS ARE TEARING. REDNESS AND DISCOMFORT.

SKIN CONTACT: IRRITATION. CAN CAUSE DEFATTING OF SKIN WHICH MAY LEAD TO DERMATITIS.

INHALATION: IRRITATION TO NOSE AND THROAT. EXTENDED OR REPEATED EXPOSURE TO CONCENTRATIONS ABOVE THE RECOMMENDED EXPOSURE LIMITS MAY CAUSE BRAIN OR NERVOUS SYSTEM DEPRESSION. CAUSING DIZZINESS. HEADACHE OR NAUSEA AND IF CONTINUED INDEFINITELY. LOSS OF CONSCIOUSNESS. LIVER AND KIDNEY DAMAGE.

REPORTS HAVE ASSOCIATED REPEATED OR PROLONGED OCCUPATIONAL OVEREXPOSURE TO SOLVENTS WITH PERMANENT BRAIN AND NERVOUS SYSTEM DAMAGE.

INGESTION: MAY CAUSE MOUTH. THROAT. ESOPHAGUS AND STOMACH IRRITATION. NAUSEA. VOMITING AND DIARRHEA.

EDICAL CONDITIONS THAT MAY BE AGGRAVATED BY EXPOSURE TO THIS PRODUCT:
PREEXISTING EYE. SKIN. LIVER. KIDNEY AND RESPIRATORY DISORDERS.

MERGENCY AND FIRST AID PROCEDURES:

IN CASE OF EYE CONTACT. FLUSH IMMEDIATELY WITH PLENTY OF WATER FOR AT LEAST 15 MINUTES AND GET MEDICAL ATTENTION; FOR SKIN. WASH THOROUGHLY WITH SOAP AND WATER. IF AFFECTED BY INHALATION OF VAPORS OR SPRAY MIST. REMOVE TO FRESH AIR. IF SWALLOWED. GET MEDICAL ATTENTION IMMEDIATELY.

SECTION IV - PHYSICAL DATA

OILING POINT.DEG.F. 212

EIGHT PER GALLON: 10.76

ERCENT VOLATILE BY VOLUME: 53.826

VAPOR DENSITY IS HEAVIER THAN AIR

EVAPORATION RATE IS SLOWER THAN ETHER

SECTION V - FIRE AND EXPLOSION HAZARD DATA

SHA FLAMMABILITY CLASSIFICATION: FLAMMABLE LIQUID CLASS IC

LASH POINT SETA CLOSED CUP. DEG F: 82

OT HAZARD CLASS: RED-LABEL. FLAMMABLE LIQUID LEL: 1.10

XTINGUISHING MEDIA: FOAM. CARBON DIOXIDE. DRY CHEMICAL. WATER FOG.

NUSUAL FIRE AND EXPLOSION HAZARDS:
IF POLYMERIZATION TAKES PLACE IN A CONTAINER. THERE IS POSSIBILITY OF VIOLENT RUPTURE OF THE CONTAINER. STYRENE VAPORS ARE UNINHIBITED AND MAY FORM POLYMERS IN VENTS OR FLAME ARRESTORS OF STORAGE TANKS RESULTING IN STOPPAGE OF VENTS. VAPORS MAY CAUSE FLASH FIRE. KEEP CONTAINERS TIGHTLY CLOSED AND ISOLATE FROM HEAT. ELECTRICAL EQUIPMENT. SPARKS AND FLAME. NEVER USE WELDING OR CUTTING TORCH ON OR NEAR DRUM (EVEN EMPTY) BECAUSE PRODUCT (EVEN JUST RESIDUE) CAN IGNITE EXPLOSIVELY.

PECIAL FIRE FIGHTING PROCEDURES:
FULL PROTECTIVE EQUIPMENT INCLUDING SELF-CONTAINED BREATHING APPARATUS SHOULD BE USED. WATER SPRAY MAY BE INEFFECTIVE. IF WATER IS USED. FOG NOZZLES ARE PREFERABLE. WATER MAY BE USED TO COOL CLOSED CONTAINERS TO PREVENT PRESSURE BUILD-UP AND POSSIBLE AUTO-IGNITION OR EXPLOSION WHEN EXPOSED TO EXTREME HEAT

MATERIAL SAFETY DATA SHEET

PRODUCT CODE IDENTITY: 944WA62 330 PRODUCT NAME: WHITE

SECTION VI - REACTIVITY DATA

STABILITY: STABLE HAZARDOUS POLYMERIZATION: MAY OCCUR.

CONDITIONS TO AVOID:
ELEVATED TEMPERATURES. IMPROPER ADDITION OF PROMOTER AND/OR CATALYST. AVOID DIRECT CONTACT OF MEKP CATALYST WITH ACCELERATOR. IF AN ACCELERATOR SUCH AS COBALT DRIER IS TO BE ADDED, MIX THIS ACCELERATOR WITH BASE MATERIAL BEFORE ADDING CATALYST.

INCOMPATIBILITY (MATERIALS TO AVOID):
OXIDIZERS. PEROXIDES. STRONG ACIDS. ALUMINUM CHLORIDE AND VINYL POLYMERS.

HAZARDOUS DECOMPOSITION PRODUCTS:
THERMAL DECOMPOSITION OR COMBUSTION CAN PRODUCE FUMES CONTAINING ORGANIC ACIDS. CARBON DIOXIDE AND CARBON MONOXIDE.

SECTION VII - SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED:
REMOVE ALL SOURCES OF IGNITION (FLAMES, HOT SURFACES, AND ELECTRICAL, STATIC, OR FRICTIONAL SPARKS). AVOID BREATHING VAPORS. VENTILATE AREA. CONTAIN AND REMOVE WITH INERT ABSORBENT AND NON-SPARKING TOOLS.

WASTE DISPOSAL METHOD:
DISPOSE OF IN ACCORDANCE WITH LOCAL, STATE AND FEDERAL REGULATIONS. DO NOT INCINERATE CLOSED CONTAINERS. INCINERATE IN APPROVED FACILITY.

SECTION VIII - SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION:
DO NOT BREATHE OR INGEST VAPORS, SPRAY MIST OR DUST WHILE APPLYING, SANDING, GRINDING, OR SAWING CURED PRODUCT. WEAR AN APPROPRIATE, (NIOSH/MSHA APPROVED) PROPERLY FITTED RESPIRATOR DURING APPLICATION AND OTHER USE OF THIS PRODUCT UNTIL ALL VAPORS, MISTS, AND DUSTS ARE EXHAUSTED, UNLESS AIR MONITORING DEMONSTRATES VAPOR AND MIST AND DUST LEVELS ARE BELOW APPLICABLE LIMITS. FOLLOW RESPIRATOR MANUFACTURER'S DIRECTIONS FOR RESPIRATOR USE. OBSERVE OSHA STANDARD 29CFR 1910.134.

VENTILATION:
PROVIDE GENERAL CLEAN AIR DILUTION OR LOCAL EXHAUST VENTILATION IN VOLUME AND PATTERN TO KEEP THE AIR CONTAMINANT CONCENTRATION BELOW THE LOWER EXPLOSION LIMIT AND BELOW CURRENT APPLICABLE EXPOSURE LIMITS IN THE MIXING, APPLICATION AND CURING AREAS; AND TO REMOVE DECOMPOSITION PRODUCT DURING WELDING AND FLAME CUTTING ON SURFACES COATED WITH THIS PRODUCT. IN CONFINED AREAS, USE ONLY WITH FORCED VENTILATION ADEQUATE TO KEEP VAPOR CONCENTRATION BELOW 20% OF LOWER EXPLOSION LIMITS. REFER TO OSHA STANDARDS 29CFR 1910.94, 1910.107, 1910.108.

NOTE: HEAVY SOLVENT VAPORS SHOULD BE REMOVED FROM LOWER LEVELS OF THE WORK AREA AND ALL IGNITION SOURCES (NONEXPLOSION-PROOF MOTORS, ETC.) SHOULD BE ELIMINATED.

PROTECTIVE GLOVES: USE SOLVENT IMPERMEABLE GLOVES TO AVOID CONTACT WITH PRODUCT

EYE PROTECTION:
DO NOT GET IN EYES. USE SAFETY EYEWEAR WITH SPLASH GUARDS OR SIDE SHIELDS. CHEMICAL GOGGLES, FACE SHIELDS.

OTHER PROTECTIVE EQUIPMENT:
AVOID CONTACT WITH SKIN. USE PROTECTIVE CLOTHING. PREVENT CONTACT WITH CONTAMINATED CLOTHING. WASH CONTAMINATED CLOTHING, INCLUDING SHOES, BEFORE REUSE.

SECTION IX - SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING:
DO NOT STORE ABOVE 120 DEG. F. STORE LARGE QUANTITIES IN BUILDINGS DESIGNED

MATERIAL SAFETY DATA SHEET

PRODUCT CODE IDENTITY: 944WA62 330 PRODUCT NAME: WHITE

TO COMPLY WITH OSHA 1910.106. KEEP AWAY FROM HEAT, SPARKS AND FLAME. KEEP CONTAINERS CLOSED WHEN NOT IN USE AND UPRIGHT TO PREVENT LEAKAGE.

OTHER PRECAUTIONS:
CONTAINERS SHOULD BE GROUNDED WHEN POURING. DO NOT TAKE INTERNALLY. WASH HANDS AFTER USING AND BEFORE SMOKING OR EATING. EMPTIED CONTAINERS MAY RETAIN HAZARDOUS RESIDUE AND EXPLOSIVE VAPORS. KEEP AWAY FROM HEAT, SPARKS AND FLAMES. DO NOT CUT, PUNCTURE OR WELD ON OR NEAR EMPTIED CONTAINERS. FOLLOW ALL HAZARD PRECAUTIONS GIVEN IN THIS DATA SHEET UNTIL CONTAINER IS THOROUGHLY CLEANED OR DESTROYED. IF THIS PRODUCT IS BLENDED WITH OTHER COMPONENTS SUCH AS THINNERS, CONVERTER, COLORANTS AND CATALYSTS PRIOR TO USE, READ ALL WARNING LABELS. ANY MIXTURE OF COMPONENTS WILL HAVE HAZARDS OF ALL COMPONENTS. FOLLOW ALL PRECAUTIONS. IF SPRAYING THIS MATERIAL, KEEP SPRAY BOOTHS CLEAN. AVOID BUILDUP OF SPRAY DUST OR OVERSPRAY IN BOOTHS OR DUCTS.

KEEP OUT OF REACH OF CHILDREN FOR INDUSTRIAL USE ONLY

DISCLAIMER AND LIMITATION OF LIABILITY

TO THE BEST OF OUR KNOWLEDGE, THE INFORMATION CONTAINED HEREIN IS ACCURATE. TO THE EXTENT ALLOWED BY LAW, THIS STATEMENT IS MADE IN LIEU OF ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING BUT NOT LIMITED TO ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, AND IS IN LIEU OF ANY OTHER OBLIGATIONS OR LIABILITY ON THE PART OF COOK PAINT AND VARNISH COMPANY.

COOK PAINT AND VARNISH COMPANY WILL NOT BE LIABLE FOR ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES. FINAL DETERMINATION OF THE SUITABILITY OF THE MATERIAL FOR THE USE CONTEMPLATED, THE MANNER OF USE, AND WHETHER THE SUGGESTED USE INFRINGES ANY PATENT IS THE SOLE RESPONSIBILITY OF THE BUYER.

MATERIAL SAFETY DATA SHEET

SECTION I

MANUFACTURER	THE NORAC COMPANY, INC.	EMERGENCY TELEPHONE	818-334-29
ADDRESS	405 S. MOTOR AVENUE, AZUSA, CA 91702	CHEMTREC 1-800-424-9300	
PRODUCT NAME	NOROX MEKP-9	CAS NO.	1338-23-4
CHEMICAL NAME	METHYL ETHYL KETONE PEROXIDE (MEKP)		
CHEMICAL FAMILY	ORGANIC PEROXIDE	FORMULA	MIXTURE OF MANY

SECTION II — HAZARDOUS INGREDIENTS

COMPONENTS	%	HAZARD DATA
METHYL ETHYL KETONE PEROXIDES	34	ORAL--RAT LD50:484 mg/kg
DIMETHYL PHTHALATE	58	ORAL--RAT LD50:6900 mg/kg
2 ETHYL HEXYL ACETATE	7	ORAL--RAT LD50:3000 mg/kg
HYDROGEN PEROXIDE	1	SKIN--RAT LD50:4060 mg/kg

SECTION III — PHYSICAL DATA

BOILING POINT °F	UNKNOWN	SPECIFIC GRAVITY (Water=1)	1.1
VAPOR PRESSURE mm Hg.	UNKNOWN	PERCENT VOLATILE BY VOLUME	UNKNOWN
VAPOR DENSITY (Air=1)	>1		
SOLUBILITY IN WATER	SLIGHT	EVAPORATION RATE	UNKNOWN

APPEARANCE AND ODOR WATER WHITE LIQUID, SLIGHT ODOR Note! 0.2% Red Dye may be added for color

SECTION IV — HEALTH HAZARD DATA

THRESHOLD LIMIT VALUE 1.5 mg/m^3 FOR METHYL ETHYL KETONE PEROXIDES

EFFECTS OF OVER-EXPOSURE: PROLONGED INHALATION OF VAPORS MAY CAUSE MUCOUS MEMBRANE IRRITATION AND VERTIGO.

EMERGENCY AND FIRST AID: MEKP IS A STRONG IRRITANT. AVOID SWALLOWING AND ALL CONTACT WITH EYES AND SKIN. WASH CONTAMINATED AREAS THOROUGHLY WITH SOAP AND WATER. FOR EYES, IRRIGATE IMMEDIATELY FOR 30 MINUTES--CALL A PHYSICIAN. IF SWALLOWED, TAKE LARGE QUANTITIE OF MILK OR WATER AND IMMEDIATELY CALL A PHYSICIAN. FOR AID TO PHYSICIAN, SUGGEST POISON CONTROL CENTER (213) 484-5151, DAY OR NIGHT.

SECTION V – REACTIVITY DATA

INCOMPATABILITY (Materials to avoid)	DIMETHYLANILINE, COBALT NAPTHENATE & OTHER PROMOTERS, ACCELERATORS, REDUCING AGENTS, OR ANY HOT MATERIAL
STABILITY	STABLE WHEN KEPT IN ORIGINAL, CLOSED CONTAINER, OUT OF DIRECT SUNLIGHT AT TEMPERATURES BELOW 80°F.
HAZARDOUS DECOMPOSITION PRODUCTS	UNKNOWN
HAZARDOUS POLYMERIZATION	WILL NOT OCCUR

SECTION VI – SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION	NONE
VENTILATION	MECHANICAL, GENERAL
EYE PROTECTION	SAFETY GOGGLES RECOMMENDED
GLOVES	PROTECTIVE GLOVES RECOMMENDED (SOLVENT RESISTANT)
OTHER	NONE

SECTION VII – FIRE AND EXPLOSION DATA

FLASH POINT (Method used) >200°F (C.O.C) FLAMMABLE LIMITS: UNKNOWN

EXTINGUISHING MEDIA	WATER FROM A SAFE DISTANCE--PREFERABLY WITH A FOG NOZZLE. IN CASE OF VERY SMALL FIRES, OTHER MEANS SUCH AS CARBON DIOXIDE, FOAM OR DRY CHEMICAL EXTINGUISHERS MAY BE EFFECTIVE. DRY CHEMICAL COMBINED WITH MEKP MAY REIGNITE. LIGHT WATER ADDITIVES MAY BE PARTICULARLY EFFECTIVE AT EXTINGUISHING MEKP FIRES. IF DRY CHEMICAL IS USED TO EXTINGUISH AN MEKP FIRE, THE EXTINGUISHED AREA MUST BE THOROUGHLY WET WITH WATER TO PREVENT REIGNITION.
SPECIAL FIRE FIGHTING PROCEDURES	
UNUSUAL FIRE AND EXPLOSION HAZARDS	THE HEAT OF DECOMPOSITION OF THE PEROXIDES ADD TO THE HEAT OF THE FIRE. DRY CHEMICAL FIRE EXTINGUISHING AGENT MAY CATALYZE THE DECOMPOSITION.

SECTION VIII – SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN EVENT OF SPILL OR RELEASE	DIKE TO PREVENT RUNOFF FROM ENTERING DRAINS, SEWERS, STREAMS, ETC. AND TRANSFER INTO CONTAINER. SPILLED MATERIAL SHOULD BE SWEPT UP WITH AN INERT, MOIST, DILUENT SUCH AS PERLITE, VERMICULITE, OR SAND, AND PLACED IN A CLEAN POLYETHYLENE LINED DRUM OR POLYETHYLENE DRUM.
WASTE DISPOSAL METHOD	IMMEDIATELY DISPOSE OF WASTE MATERIAL IN ACCORDANCE WITH FEDERAL, STATE AND LOCAL REGULATIONS.

SECTION IX – SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING	MEKP SHOULD NEVER BE ADDED TO HOT SOLVENTS OR MONOMERS AS VIOLENT DECOMPOSITION AND/OR REACTION MAY RESULT. WHEN USING SPRAY EQUIPMENT, NEVER SPRAY RAW MEKP ONTO CURING OR INTO RAW RESIN OR FLUES. KEEP MEKP IN ITS ORIGINAL CONTAINER. DO NOT STORE WITH FOOD OR DRINK. DO NOT USE NEAR FOOD OR DRINK.
OTHER PRECAUTIONS	

GENERAL ADHESIVES — DATA SHEET

PRODUCT NUMBER: 69 X 3063 DATE: 12-15-87

DESCRIPTION: 69x3063 is a clear adhesive for bonding carpet and foam for marine and RV applications. Good open time and heat resistance.

APPLICATION: Apply 69x3063 either by spray, brush, or roller.

PHYSICAL CHARACTERISTICS:

BASE:	Thermoplastic Rubber
COLOR: (DRY):	Straw
(WET):	Amber
SOLIDS:	34% +/- 1%
VISCOSITY:	1000 +/- 200 cps
WEIGHT PER GALLON:	10.0 lbs/gal
DILUENT:	1,1,1-Trichloroethane
SHELF LIFE:	6 Months
HEAT RESISTANCE:	200 F.

66% by wt.

6100 Centennial Blvd. • PO Box 24090 • Nashville, TN 37202 • (615) 386-9955

% Volatiles by wt/volume = 66%

GENERAL ADHESIVES

MATERIAL SAFETY DATA SHEET

===SECTION I - MANUFACTURER'S INFORMATION===

MANUFACTURER'S NAME AND ADDRESS	EMERGENCY TELEPHONE NUMBERS	
GENERAL ADHESIVES	WEEKDAYS	(615) 350-8555
6100 CENTENNIAL BLVD.	NIGHTS/WEEKENDS	(615) 350-8989
NASHVILLE, TN. 37209	MSDS INFORMATION	(615) 350-8555

DATE PREPARED: Revised February 19, 1988 SIGNATURE OF PREPARER: Lisa Dishner

IDENTITY: 69 X 3063 TRADE NAME: Carpet/Foam Adhesive

===SECTION II - HAZARDOUS INGREDIENTS/IDENTITY INFORMATION===
(Specific Chemical Identity; Common Name(s))

HAZARDOUS COMPONENTS	OSHA PEL	ACGIH TLV	OTHER LIMITS	CAS#
Stoddard Solvent 5-10%	500 ppm	100 ppm	STEL 200 ppm	8052-41-3
Methyl Chloroform (1,1,1-Trichloroethane) 50-60%	350 ppm	350 ppm	STEL 450 ppm	71-55-6
Diethylene Ether (Skin) *	100 ppm	25 ppm	STEL 100 ppm	123-91-1

*The Diethylene Ether is an inhibitor in the 1,1,1-Trichloroethane. This product contains more than 0.1% but less than 3.0% Diethylene Ether. Potential risks to humans can b minimized by observing good work practices and personal hygiene procedures.

5-10 Mineral Spirits, Varsol

===SECTION III - PHYSICAL CHEMICAL CHARACTERISTICS===

Boiling Point (F): 165-380 F Vapor Pressure: 92 @ 20 C (mm Hg.) Vapor Density: >1 (Air=1)

Specific Gravity: 1.25 (Water=1) Melting Point: N/A Evaporation Rate: 4.9 (Butyl Acetate=1)

Solubility in Water: None.

Appearance and Odor: Natural or red in color; solvent odor.

===SECTION IV - FIRE AND EXPLOSION HAZARD DATA===

Flash Point (F): None Method Used: TCC

Flammable Limits: (LEL) 8.0% (UEL) 10.5%

Extinguishing Media: CO2, Dry Chemical, Foam, Halon.

Special Fire Fighting Procedures: Self-contained breathing apparatus must be worn.

Unusual Fire and Explosion Hazards: Cool drums with water spray to prevent pressure explosion. Vapors may ignite explosively.

===SECTION V - REACTIVITY DATA===

STABILITY: Stable: XXX Unstable: _____

Incompatability (Materials to Avoid): Active metals such as Aluminum, Zinc, Magnesium, etc. Strong acids or bases.

Hazardous Decomposition or Byproducts: HCL, Carbon Monoxide, Chlorine and Products of partia decomposition.

Hazardous Polymerization: May Occur: _____ Will Not Occur: XXX

Conditions to Avoid: Contact with active metals such as Aluminum, Zinc, Magnesium, etc., flame, spark or extreme heat.

===SECTION VI - HEALTH HAZARD DATA===

ROUTES OF ENTRY

INGESTION:

ACUTE HEALTH HAZARDS: Unlikely route of exposure. Ingesting this product may cause gastrointestinal irritation, nausea, vomiting and diarrhea.

CHRONIC HEALTH HAZARDS: N/E

EMERGENCY AND FIRST AID PROCEDURES: Do not induce vomiting. Keep the affected person warm, quiet and get medical attention. Aspiration of this material into the lungs du to vomiting can cause chemical pneumontis which can be fatal.

SKIN:

ACUTE HEALTH HAZARDS: May cause skin irritation, jaundice or dermatitis. This product may be absorbed through the skin.

CHRONIC HEALTH HAZARDS: Reproductive abnormalities have been noted in studies animals exposed to high concentrations.

EMERGENCY AND FIRST AID PROCEDURES: If this product comes in contact with the skin, promptly wash the contaminated skin using soap and water or a skin cleanser. If this product soaks through the clothing, remove the clothing promptly and wash the skin with soap and water or a skin cleanser. If irritation persist after washing, get medical attention. not wear contaminated clothing before laundering.

EYES:

ACUTE HEALTH HAZARDS: If this product is splashed into the eye, may cause seve irritation, pain, slight corneal injury, redness, tearing and blurred vision.

CHRONIC HEALTH HAZARDS: N/E

EMERGENCY AND FIRST AID PROCEDURES: If this product gets in the eyes, wash eye immediately with large amounts of water, lifting the lower and upper lids occasionally. If irritation is present after washing, get medical attention. Contact lenses should not be wo when working with this product.

===SECTION VI - HEALTH HAZARD DATA CONT'D===

INHALATION:

ACUTE HEALTH HAZARDS: Overexposure to this product may cause nausea, irritation to the respiratory tract, fatigue, vomiting, marrow hypoplasia, and headache. Vapors may also cause eye and nasal irritation. Continued exposure at extremely high levels may cause staggering, unconsciousness, irregular heartbeat, and asphyxiation.

CHRONIC HEALTH HAZARDS: Damage to the Central Nervous System, liver, kidney and respiratory system could result from chronic continual overexposure to this product.

EMERGENCY AND FIRST AID PROCEDURES: If a person breathes in large amounts of this product, move the exposed person to fresh air at once. If breathing has stopped, perform artificial respiration. Keep the affected person warm and at rest. Get medical attention as soon as possible.

Carcinogenicity:	NTP?	IARC Monographs?	OSHA Regulated?
	Yes: No:	Yes: XXX No:	Yes: No: XXXX
	1985	Animals indefinite 20,615,79	
		Animal Positive 11,247,76	

Medical Conditions Generally Aggravated by Exposure: Impaired liver and renal functions, cardiac disease, central nervous system, obstructive airway diseases, and pre-existing skin disorders.

===SECTION VII - PRECAUTIONS FOR SAFE HANDLING AND USE===

Steps to be taken in case Material is Released or Spilled: Ventilate area. Contain spill. Clean up area by wiping, mopping or absorption with an absorbent material. Transfer material to a metal container. Avoid breathing vapors. Wear appropriate respirator and protective clothing.

Waste Disposal Method: Contaminated absorbent material or waste product must be disposed of in accordance with regulations in the Resource Conservation and Recovery Act and/or State, local or EPA regulations.

Precautions to be taken in Handling and Storing: Avoid contact with skin and avoid breathing vapors. Pipe vents outdoors. Store in cool, dry ventilated area. Vapors are heavier than air and will collect in low areas.

Other Precautions: No smoking in presence of vapors. Prevent moist air from entering storage area. Avoid prolonged contact with or storage in aluminum and its alloys. Contact with aluminum parts in a pressurizable fluid system may cause violent reactions.

===SECTION VIII - CONTROL MEASURES===

Respiratory Protection (Specify) Type: If exposure may or does exceed occupational exposure limits use a NIOSH/MSHA approved respirator to prevent overexposure. Use either a self-contained air supplied respirator or organic vapor respirator in accordance with 29 CFR 1910.134.

Ventilation:

Local Exhaust: Yes, generally required to reduce exposure to below OSHA allowable levels.

Mechanical (General): Not generally required if local exhaust ventilation is provided. If room air is not recirculated, but exhausted, may be adequate.

Special Exhaust: N/A

Other: Galvanized or Aluminum materials may be reactive with this product.

Protective Gloves: Employees should be provided with impervious gloves if direct skin contact is made with the product in a liquid state.

Eye Protection: Chemical Safety goggles, glasses or face shield (8" minimum) should be worn i a splash hazard is present. Contact lenses should not be worn when using this product.

Other Protective Clothing or Equipment: Impervious clothing should be worn to prevent repeate or prolonged skin contact with the product in a liquid state.

Special Work/Hygienic Practices: Wash hands with soap and water or a skin cleanser before eating, drinking, smoking, or using toilet facilities.

The following codes are being used:

N/A means: Not Applicable
N/E means: Not Established

ACETONE REVISION OF: 06/23/86

SEA RAY BOATS INC ORDER NO: 640W16840

2600 SEARAY BLVD
KNOXVILLE TN 37914

MCKESSON CHEMICAL COMPANY ONE POST STREET SAN FRANCISCO, CA 94104

EMERGENCY ASSISTANCE

FOR EMERGENCY ASSISTANCE INVOLVING CHEMICALS CALL CHEMTREC
(800) 424-9300.

FOR PRODUCT AND SALES INFORMATION

CONTACT YOUR LOCAL MCKESSON CHEMICAL COMPANY SERVICE CENTER

PRODUCT IDENTIFICATION

PRODUCT NAME: ACETONE
CAS NO.:67-64-1
COMMON NAMES/SYNONYMS: ACETONE;
MCKESSON CODE:T1018
2-PROPANONE
FORMULA: C3 H6 O
DATE ISSUED: 06/86
SUPERCEDES: 02/86
HAZARD RATING (NFPA 704)
HEALTH: 1
FIRE: 3
REACTIVITY: 0
SPECIAL: NONE
HAZARD RATING SCALE:
0=MINIMAL 3=SERIOUS
1=SLIGHT 4=SEVERE
2=MODERATE

HAZARDOUS INGREDIENTS

		EXPOSURE LIMITS, PPM			
		OSHA	ACGIH	OTHER	
COMPONENT	%	PEL	TLV	LIMIT	HAZARD
ACETONE	>99	1000	750	NONE	FLAMMABLE;IRRITANT

PHYSICAL/CHEMICAL CHARACTERISTICS

ACETONE REVISION OF: 06/23/86

BOILING POINT, DEG F: 133 VAPOR PRESSURE, MM HG/20 DEG C:184
MELTING POINT, DEG F: -142 VAPOR DENSITY (AIR=1):2.0
SPECIFIC GRAVITY (WATER=1): 0.79 WATER SOLUBILITY, %:100
APPEARANCE AND ODOR: CLEAR, EVAPORATION RATE (BUTYL ACETATE=1):14
COLORLESS LIQUID; SWEET ODOR

----------FIRST AID MEASURES----------

IF INHALED: REMOVE TO FRESH AIR. GIVE ARTIFICIAL RESPIRATION IF NOT BREATHING. GET IMMEDIATE MEDICAL ATTENTION.

IN CASE OF EYE CONTACT: IMMEDIATELY FLUSH EYES WITH LOTS OF RUNNING WATER FOR 15 MINUTES, LIFTING THE UPPER AND LOWER EYELIDS OCCASIONALLY. GET IMMEDIATE MEDICAL ATTENTION.

IN CASE OF SKIN CONTACT: IMMEDIATELY WASH SKIN WITH LOTS OF SOAP AND WATER. REMOVE CONTAMINATED CLOTHING AND SHOES; WASH BEFORE REUSE. GET MEDICAL ATTENTION IF IRRITATION PERSISTS AFTER WASHING.

IF SWALLOWED: IF CONSCIOUS, IMMEDIATELY INDUCE VOMITING BY GIVING 2 GLASSES OF WATER AND STICKING A FINGER DOWN THE THROAT. GET IMMEDIATE MEDICAL ATTENTION. DO NOT GIVE ANYTHING TO AN UNCONSCIOUS OR CONVULSING PERSON.

----------HEALTH HAZARD INFORMATION----------

PRIMARY ROUTES OF EXPOSURE: INHALATION, SKIN OR EYE CONTACT.

SIGNS AND SYMPTOMS OF EXPOSURE

INHALATION: PROLONGED OR REPEATED EXPOSURE OR BREATHING VERY HIGH CONCENTRATIONS MAY CAUSE HEADACHES, NAUSEA, VOMITING, DIZZINESS, OTHER CENTRAL NERVOUS SYSTEM EFFECTS, CONVULSIONS, AND IN EXTREME CASES, UNCONSCIOUSNESS AND DEATH.

EYE CONTACT: VAPORS WILL IRRITATE THE EYES. LIQUID AND MISTS WILL IRRITATE AND MAY BURN THE EYES.

SKIN CONTACT: BRIEF CONTACT MAY DRY THE SKIN. PROLONGED OR REPEATED CONTACT MAY IRRITATE THE SKIN, CAUSING DERMATITIS.

SWALLOWED: SWALLOWING LARGE QUANTITIES CAUSES HEADACHES, NAUSEA, VOMITING, AND PERHAPS UNCONSCIOUSNESS. CAN ALSO CAUSE LIVER AND KIDNEY

INJURY.

CHRONIC EFFECTS OF EXPOSURE: NO SPECIFIC INFORMATION AVAILABLE.

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE: PREEXISTING EYE OR SKIN DISORDERS MAY BE AGGRAVATED BY ACETONE EXPOSURE. ALSO, USE OF ALCOHOLIC BEVERAGES ENHANCES TOXIC EFFECTS.

----------TOXICITY DATA----------

ORAL: RAT LD50 = 9750 MG/KG

DERMAL: RABBIT LD50 = 20 G/KG

INHALATION: RAT LC50 = 16,000 PPM/4 HR

CARCINOGENICITY: THIS MATERIAL IS NOT CONSIDERED TO BE A CARCINOGEN BY THE NATIONAL TOXICOLOGY PROGRAM, THE INTERNATIONAL AGENCY FOR RESEARCH ON CANCER, OR THE OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION

OTHER DATA: INHALATION HUMAN TCLO = 500 PPM (EYE)

----------PERSONAL PROTECTION----------

VENTILATION: LOCAL MECHANICAL EXHAUST VENTILATION CAPABLE OF MAINTAINING EMISSIONS AT THE POINT OF USE BELOW THE PEL.

RESPIRATORY PROTECTION: IF USE CONDITIONS GENERATE VAPORS OR MISTS, WEAR A NIOSH-APPROVED RESPIRATOR APPROPRIATE FOR THOSE EMISSION LEVELS. APPROPRIATE RESPIRATORS MAY BE A FULL FACEPIECE OR A HALF MASK AIR-PURIFYING CARTRIDGE RESPIRATOR EQUIPPED FOR ORGANIC VAPORS/MISTS, A SELF-CONTAINED BREATHING APPARATUS IN THE PRESSURE DEMAND MODE, OR A SUPPLIED-AIR RESPIRATOR.

EYE PROTECTION: CHEMICAL GOGGLES UNLESS A FULL FACEPIECE RESPIRATOR IS ALSO WORN. IT IS GENERALLY RECOGNIZED THAT CONTACT LENSES SHOULD NOT BE WORN WHEN WORKING WITH CHEMICALS BECAUSE CONTACT LENSES MAY CONTRIBUTE TO THE SEVERITY OF AN EYE INJURY.

PROTECTIVE CLOTHING: LONG-SLEEVED SHIRT, TROUSERS, SAFETY SHOES, RUBBER GLOVES, AND RUBBER APRON.

OTHER PROTECTIVE MEASURES: AN EYEWASH AND SAFETY SHOWER SHOULD BE NEARBY AND READY FOR USE.

----------FIRE AND EXPLOSION INFORMATION----------

FLASH POINT, DEG F: 0 FLAMMABLE LIMITS IN AIR, %
METHOD USED: TCC LOWER: 2 UPPER: 13
EXTINGUISHING MEDIA: USE WATER SPRAY, DRY CHEMICAL, CO2, OR ALCOHOL FOAM.

SPECIAL FIRE FIGHTING PROCEDURES: FIRE FIGHTERS SHOULD WEAR SELF-CONTAINED BREATHING APPARATUS AND FULL PROTECTIVE CLOTHING. USE WATER SPRAY TO COOL NEARBY CONTAINERS AND STRUCTURES EXPOSED TO FIRE.

UNUSUAL FIRE AND EXPLOSION HAZARDS: ACETONE IS EXTREMELY FLAMMMABLE. EXTINGUISH ALL NEARBY SOURCES OF IGNITION. AVOID ACCUMULATION OF WATER OR ACETONE VAPORS BECAUSE AQUEOUS SOLUTIONS CONTAINING MORE THAN 2.5% ACETONE ARE FLAMMABLE.

----------HAZARDOUS REACTIVITY----------

STABILITY: STABLE POLYMERIZATION: WILL NOT OCCUR
CONDITIONS TO AVOID: HEAT, SPARKS, AND OPEN FLAMES.

MATERIALS TO AVOID: ACIDS, OXIDIZING MATERIALS, POTASSIUM T-BUTOXIDE, ALKALIS, AMINES, ALKANOLAMINES, AMMONIA, ALDEHYDES, AND CHLORINATED COMPOUNDS.

HAZARDOUS DECOMPOSITION PRODUCTS: MAY LIBERATE CARBON MONOXIDE, CARBON DIOXIDE, AND UNIDENTIFIED ORGANIC COMPOUNDS IN BLACK SMOKE.

----------SPILL, LEAK, AND DISPOSAL PROCEDURES----------

ACTION TO TAKE FOR SPILLS OR LEAKS: WEAR PROTECTIVE EQUIPMENT INCLUDING RUBBER BOOTS, RUBBER GLOVES, RUBBER APRON, AND A SELF-CONTAINED BREATHING APPARATUS IN THE PRESSURE DEMAND MODE OR A SUPPLIED-AIR RESPIRATOR. IF THE SPILL OR LEAK IS SMALL, A FULL FACEPIECE AIR-PURIFYING CARTRIDGE RESPIRATOR EQUIPPED FOR ORGANIC VAPORS MAY BE SATISFACTORY. IN ANY EVENT, ALWAYS WEAR EYE PROTECTION. EXTINGUISH ALL IGNITION SOURCES AND ENSURE THAT ALL HANDLING EQUIPMENT IS ELECTRICALLY GROUNDED. FOR SMALL SPILLS OR DRIPS, MOP OR WIPE UP AND DISPOSE OF IN DOT-APPROVED WASTE CONTAINERS. FOR LARGE SPILLS, CONTAIN BY DIKING WITH SOIL OR

OTHER NON-COMBUSTIBLE ABSORBENT MATERIALS AND THEN PUMP INTO DOT-APPROVED WASTE CONTAINERS; OR ABSORB WITH NON-COMBUSTIBLE SORBENT MATERIAL, PLACE RESIDUE IN DOT-APPROVED WASTE CONTAINERS. KEEP OUT OF SEWERS, STORM DRAINS, SURFACE WATERS, AND SOIL.
COMPLY WITH ALL APPLICABLE GOVERNMENTAL REGULATIONS ON SPILL REPORTING, AND HANDLING AND DISPOSAL OF WASTE.

DISPOSAL METHODS: DISPOSE OF CONTAMINATED PRODUCT AND MATERIALS USED IN CLEANING UP SPILLS OR LEAKS IN A MANNER APPROVED FOR THIS MATERIAL. CONSULT APPROPRIATE FEDERAL, STATE AND LOCAL REGULATORY AGENCIES TO ASCERTAIN PROPER DISPOSAL PROCEDURES.
NOTE: EMPTY CONTAINERS CAN HAVE RESIDUES, GASES AND MISTS AND ARE SUBJECT TO PROPER WASTE DISPOSAL, AS ABOVE.

----------SPECIAL PRECAUTIONS----------

HANDLING AND STORAGE PRECAUTIONS: KEEP AWAY FROM HEAT, SPARKS, AND FLAMES. STORE IN A COOL, DRY, WELL-VENTILATED PLACE AWAY FROM INCOMPATIBLE MATERIALS. VENT CONTAINER FREQUENTLY, AND MORE OFTEN IN WARM WEATHER, TO RELIEVE PRESSURE. ELECTRICALLY GROUND ALL EQUIPMENT WHEN HANDLING THIS PRODUCT AND USE ONLY NON-SPARKING TOOLS. KEEP CONTAINER TIGHTLY CLOSED WHEN NOT IN USE. DO NOT USE PRESSURE TO EMPTY CONTAINER. WASH THOROUGHLY AFTER HANDLING. DO NOT GET IN EYES, ON SKIN, OR ON CLOTHING.

REPAIR AND MAINTENANCE PRECAUTIONS: DO NOT CUT, GRIND, WELD, OR DRILL ON OR NEAR THIS CONTAINER.

OTHER PRECAUTIONS: CONTAINERS, EVEN THOSE THAT HAVE BEEN EMPTIED, WILL RETAIN PRODUCT RESIDUE AND VAPORS. ALWAYS OBEY HAZARD WARNINGS AND HANDLE EMPTY CONTAINERS AS IF THEY WERE FULL.

----------FOR ADDITIONAL INFORMATION----------

CONTACT DOUGLAS EISNER, TECHNICAL DIRECTOR, MCKESSON CHEMICAL COMPANY, DURING BUSINESS HOURS, PACIFIC TIME (415)983-9214.

----------NOTICE----------

ALL INFORMATION, RECOMMENDATIONS, AND SUGGESTIONS APPEARING HEREIN CONCERNING THIS PRODUCT ARE BASED UPON DATA OBTAINED FROM THE MANUFACTURER AND/OR RECOGNIZED TECHNICAL SOURCES; HOWEVER, MCKESSON

CHEMICAL COMPANY ("MCC") MAKES NO WARRANTY, REPRESENTATION OR GUARANTY AS TO THE ACCURACY, SUFFICIENCY OR COMPLETENESS OF THE MATERIAL SET FORTH HEREIN. IT IS THE USER'S RESPONSIBILITY TO DETERMINE THE SAFETY, TOXICITY AND SUITABILITY OF HIS OWN USE, HANDLING AND DISPOSAL OF THE PRODUCT. ADDITIONAL PRODUCT LITERATURE MAY BE AVAILABLE UPON REQUEST. SINCE ACTUAL USE BY OTHERS IS BEYOND OUR CONTROL, NO WARRANTY, EXPRESS OR IMPLIED, IS MADE BY MCC AS TO THE EFFECTS OF SUCH USE, THE RESULTS TO BE OBTAINED OR THE SAFETY AND TOXICITY OF THE PRODUCT, NOR DOES MCC ASSUME ANY LIABILITY ARISING OUT OF USE BY OTHERS OF THE PRODUCT REFERRED TO HEREIN. THE DATA IN THIS MSDS RELATE ONLY TO THE SPECIFIC MATERIAL DESIGNATED HEREIN AND DO NOT RELATE TO USE IN COMBINATION WITH ANY OTHER MATERIAL OR IN ANY PROCESS.

----------REVISION---------- 0000002

06/86: ADDED HAZARD INFORMATION TO INHALATION, SWALLOWING, AND MEDICAL CONDITIONS SECTIONS. ADDED INHALATION TOXICITY DATA AND CORRECTED "OTHER" TOXICITY DATA. REVISED RESPIRATORY AND EYE PROTECTION. REVISED FIRE AND EXPLOSION INFORMATION SECTION. ADDED MATERIALS TO AVOID AND REVISED SPILL/LEAK PROCEDURES AND HANDLING ADVICE.

********** END OF MSDS **********

Bottom Paint

U.S. DEPARTMENT OF LABOR
Occupational Safety and Health Administration

MATERIAL SAFETY DATA SHEET

Required under USDL Safety and Health Regulations for Ship Repairing, Shipbuilding, and Shipbreaking (29 CFR 1915, 1916, 1917)

SECTION I

MANUFACTURER'S NAME: NAUTICAL COATINGS, INC.	EMERGENCY TELEPHONE NO.: 813-536-3789
ADDRESS (Number, Street, City, State, and ZIP Code): 12490 Belcher Road, Largo, Fl. 33543	
CHEMICAL NAME AND SYNONYMS: ANTI-FOULING PAINT	TRADE NAME AND SYNONYMS: SEA HAWK OMP-II
CHEMICAL FAMILY:	FORMULA:

SECTION II - HAZARDOUS INGREDIENTS

PAINTS, PRESERVATIVES, & SOLVENTS	%	TLV (Units)	ALLOYS AND METALLIC COATINGS	%	TLV (Units)
PIGMENTS Tri-outyl tin fluoride	4.6		BASE METAL		
CATALYST			ALLOYS		
VEHICLE Tributyl tin methacrylate	10.8		METALLIC COATINGS		
SOLVENTS Aromatic hydro-carbons	42.9	100 ppm	FILLER METAL PLUS COATING OR CORE FLUX		
ADDITIVES			OTHERS		
OTHERS					

HAZARDOUS MIXTURES OF OTHER LIQUIDS, SOLIDS, OR GASES	%	TLV (Units)

SECTION III - PHYSICAL DATA

BOILING POINT (°F.)		SPECIFIC GRAVITY (H_2O=1)	1.38
VAPOR PRESSURE (mm Hg.)		PERCENT VOLATILE BY VOLUME (%)	60
VAPOR DENSITY (AIR=1) Geater than	1	EVAPORATION RATE n.butyl acetate	0.19
SOLUBILITY IN WATER	slight		
APPEARANCE AND ODOR	Liquid. Odor of Xylol.		

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

FLASH POINT (Method Used): 79° F TCC	FLAMMABLE LIMITS	LEL: 0.7	UEL: 7

EXTINGUISHING MEDIA: Water spray, CO_2, Foam, dry chemical

SPECIAL FIRE FIGHTING PROCEDURES: Fire fighters should be equipped with self contained breathing apparatus.

UNUSUAL FIRE AND EXPLOSION HAZARDS: Flammable if exposed to heat, sparks, or flame.

(Continued on reverse side)

SECTION V - HEALTH HAZARD DATA

THRESHOLD LIMIT VALUE
Organotin compounds - 0.1mg. Sn/M^3

EFFECTS OF OVEREXPOSURE
Causes severe damage to eyes and skin. Toxic by ingestion. Fumes are irritating to upper respiratory tract.

EMERGENCY AND FIRST AID PROCEDURES
In case of eye contact, flush with flowing water at least 15 minute and get immediate medical attention. Remove contaminated clothing. Skin: Flush w ith water and wash with soap & water. Inhalation:move exposed individual to fresh air.

SECTION VI - REACTIVITY DATA

STABILITY	UNSTABLE		CONDITIONS TO AVOID
	STABLE	X	Exposure to heat, sparks and fire.

INCOMPATABILITY *(Materials to avoid)*
Strong oxidizing agents

HAZARDOUS DECOMPOSITION PRODUCTS

HAZARDOUS POLYMERIZATION	MAY OCCUR		CONDITIONS TO AVOID
	WILL NOT OCCUR	X	

SECTION VII - SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED
Eliminate all ignition sources.Absorb spills with sand or other inert material, using non-sparking tools. Place in suitable containers for disposal.

WASTE DISPOSAL METHOD
Incinerate or dispose of as solid waste. Follow all applicable regulations for polution control.

SECTION VIII - SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION *(Specify type)*
Use NIOSH approved respirator if airborn concentration exceeds TLV

VENTILATION	LOCAL EXHAUST: Required	SPECIAL
	MECHANICAL *(General)*: Required	OTHER

PROTECTIVE GLOVES: Required	EYE PROTECTION: Chemical workers goggles

OTHER PROTECTIVE EQUIPMENT
Emergency eye-wash

SECTION IX - SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING
Avoid all skin and eye contact.. Provide adequate ventilation, ; Do not breathe fumes. Launder contaminated clothing before re-use.

OTHER PRECAUTIONS
Store in area suitable for flammable metarials.

4F0 834-110

EXHIBIT "B"

Sea Ray Boats, INC at the Sykes Creek Facility shall be in the business of manufacturing fiberglass pleasure boats.

The process is generally described as follows:

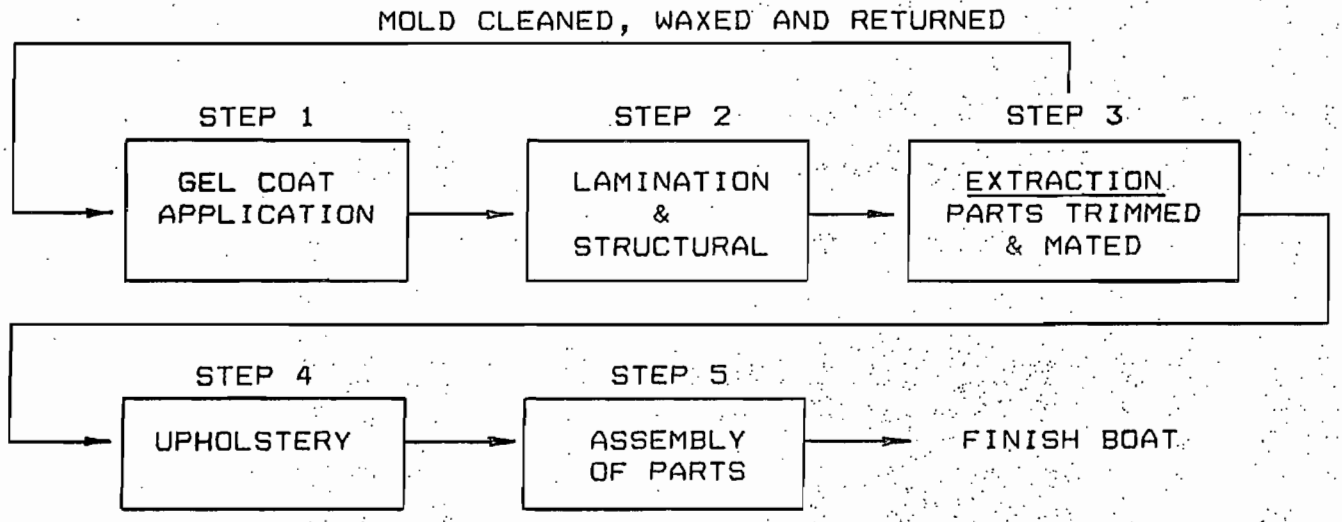
Step 1. Gel coat (the exterior colors) are sprayed into a mold by an airless method. Gel Coat is described in the attached Material Safety Data Sheets titled Exhibit A.

Step 2. Structural resin and fiberglass is again sprayed by an airless method into the mold over the Gel Coat and wooden and foam parts are added for rigidity. Resin is described in the attached Material Safety Data Sheets titled Exhibit A.

Step 3. After the lamination (resin applications) process the hull and deck parts plus any miscellaneous small parts are extracted from their molds and are trimmed of excess or overspray. (Molds are cleaned, waxed and returned to Step 1).

Step 4. Glue is utilized in the preparation of upholstered parts, which are also used in the final assembly process.

Step 5. The boat assembly process utilizes the fiberglass parts, the exposed wooden parts and other materials and parts which come to the site in a ready to use condition (i.e. they are not manufactured on site).



CHEMISTRY

Polyester resin is a chemical chain containing organic acids and alcohols with an ester linkage (hence the name, polyester).

Styrene is the most commonly used crosslinking agent that connects the polyester chains and creates a polyester resin which is liquid and flexible for the fabrication of parts.

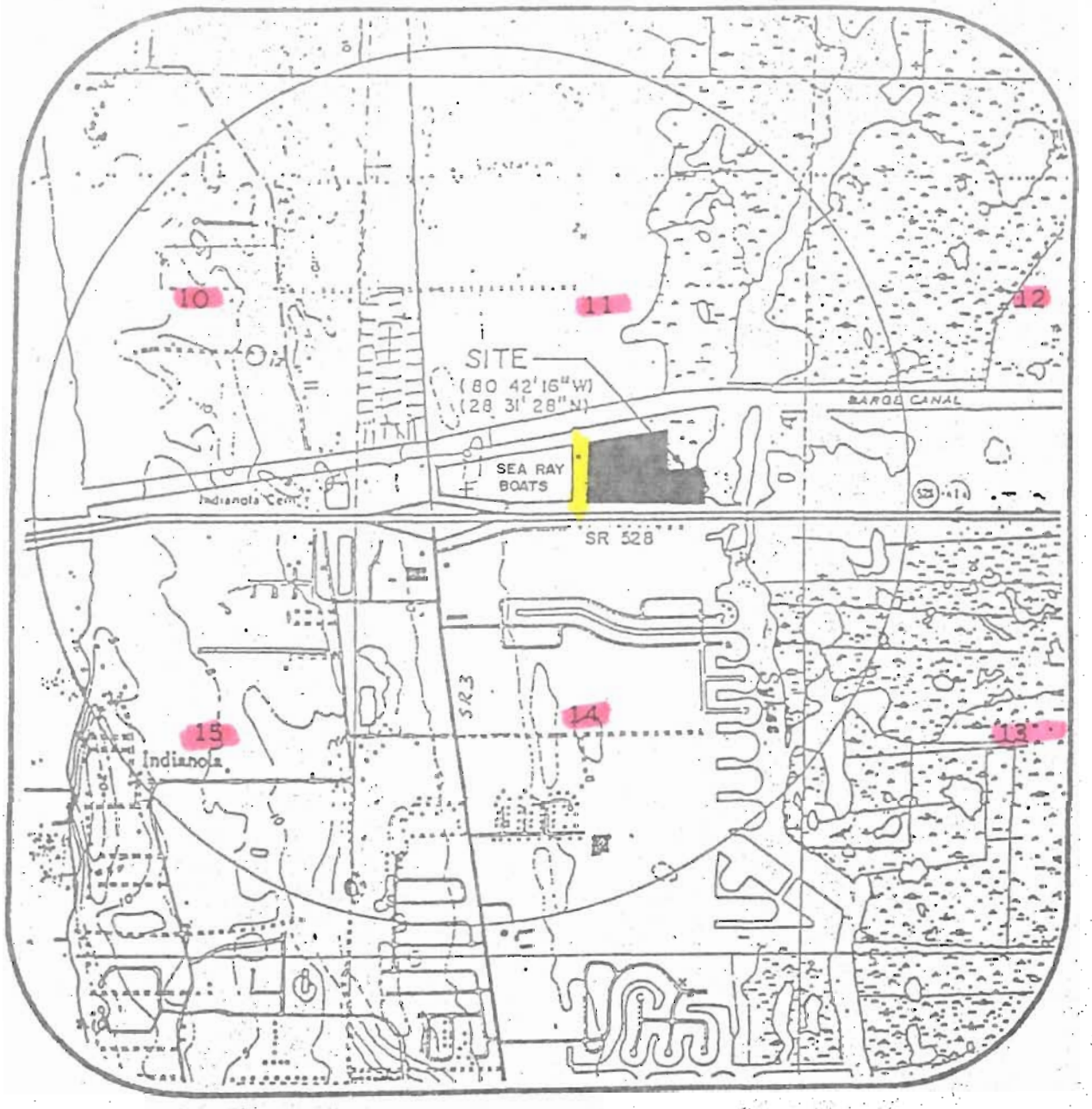
Styrene, as a crosslinking agent, reacts with the available bond sites on the polyester chain, usually the unsaturated organic acid.

When the resin arrives at the plant it is in a liquid form: a polyester thinned with 30 to 45% styrene monomer and mixed with inhibitors to prevent a spontaneous cross-linking reaction.

Catalysts, promoters and temperature control the rate of cross-linking or reaction. Methyl Ethyl Ketone Peroxide is the catalyst used and is normally a 1% addition.

Acetone is used sparingly as a solvent to clean equipment after application of the resin.

EXHIBIT "C"



VICINITY MAP

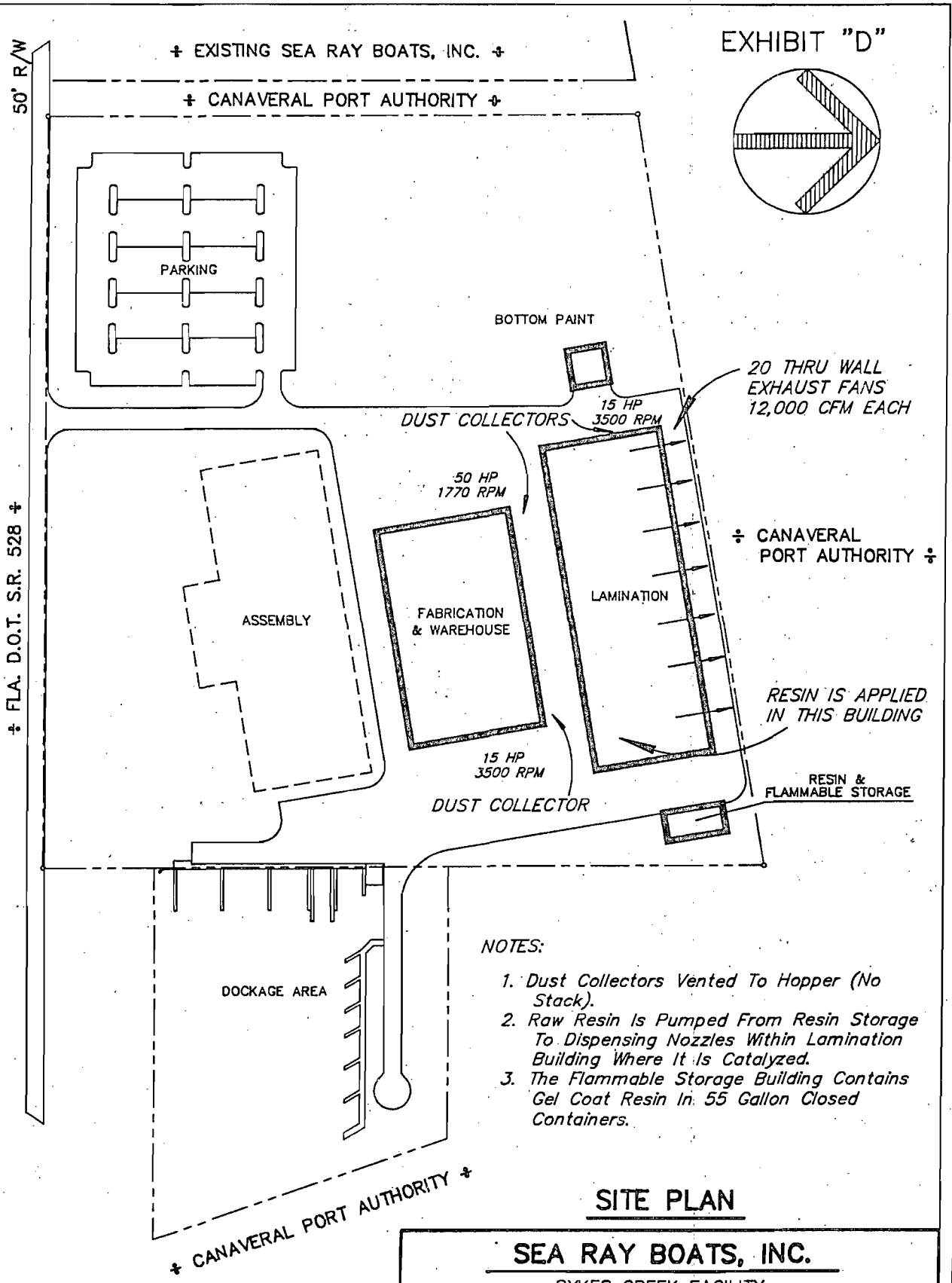
1" = 2000'

ADJACENT PROPERTY OWNERS:

1. CANAVERAL PORT AUTHORITY
   P.O. BOX 267
   CAPE CANAVERAL, FL 32920

2. FLORIDA DEPARTMENT OF TRANSPORTATION

EXHIBIT "D"



NOTES:

1. Dust Collectors Vented To Hopper (No Stack).
2. Raw Resin Is Pumped From Resin Storage To Dispensing Nozzles Within Lamination Building Where It Is Catalyzed.
3. The Flammable Storage Building Contains Gel Coat Resin In 55 Gallon Closed Containers.

0 50 100 150 200 400 600

FEET

SITE PLAN

SEA RAY BOATS, INC.

SYKES CREEK FACILITY

MERRITT ISLAND, FLORIDA

SCALE: 1" = 200'

DATE: 6-20-88

DRAWN:

CANTELOU ASSOCIATES

CONSULTING ENGINEERS • SURVEYORS • PLANNERS

1359 Silver Bluff Rd. Suite B-3/P.O. Box 3102/Aiken, S.C. 29801

CASE HISTORY SHEET

File Name Sea Ray/Lamination + Assembly

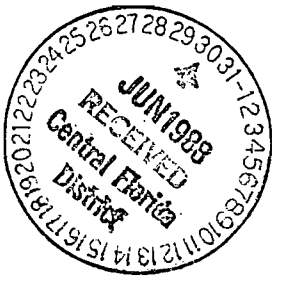
PATS Number AC05-151435 Permit Number

Date	Action Taken	Init.	Time	Miles
ENTERED JUN 30 1988		R	.36	

Total:

SEA RAY BOATS, INC.
WORLD HEADQUARTERS, 2600 SEA RAY BLVD., KNOXVILLE, TENNESSEE 37914 (615) 522-4181

June 28, 1988



State of Florida
Department of Environmental Regulation
Central Florida District
3319 Maguire Boulevard
Orlando, Florida 32803-3767

Gentlemen:

Please be advised that G. E. Cantelou, Jr., a professional engineer, is serving as a consultant to our Company in matters attendant to our new manufacturing plant to be located in Merritt Island, Florida and will be filing with your offices as our representative an Application To Operate/Construct Air Pollution Sources seeking a construction permit with respect to such facility.

Very truly yours,

SEA RAY BOATS, INC.

John A. Cronkhite
Senior Vice President/
General Counsel

JAC:cbh

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RECEIVED
DEC 11 1989
DER - BAQM

12/6/89

John Reynolds
Dept. of Environmental Regulation
2600 Blairstone Road
Tallahassee, Fl.
32399-2400

Dear John,

Thank you for taking the time yesterday to explain the DER's current interpretation of Florida environmental law regarding evaporation of water based resin cleaning products.

There is widespread interest by those in the fiberglass industry to find alternatives to acetone, and for three years "emulsifiers" have been proven both cost effective and operationally acceptable in FRP shops doing open mold work and hand lay-up. The hitch is finding disposal methods for the spent emulsifier that are both legal and not cost prohibitive.

I am hoping to establish a firm methodology for disposing of spent emulsifier by evaporation and towards this end I'm gathering documentation on the contents of the materials that would be released into the air as well as the proper application, permitting, and control processes that would be required of individual businesses. Any information the DER can provide regarding VOC emissions and permitting will be greatly appreciated.

As you requested, I'm enclosing information on the Templex emulsifier. If you like I'll follow up with literature describing the recycling and evaporation equipment we recommend.

Our Templex representative in Florida is Bruce Hale, ph 407-260-5747. Bruce services those in the FRP business, makes contact with local sewer districts, and has met with Bruce Mitchel to explain our processes.

Sincerely yours,

Andy Garrett
FRP Product Mgr.

CC:BH

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Andy Garrett
FRP Product Manager
Res. (206) 789-6593

4401 SE Johnson Creek Blvd., Portland, OR 97222
(503) 653-9734 1-800-554-4666 FAX (503) 653-0409
A Division of ASSOCIATED CHEMISTS, INC.

TEMPLEX
A Division of
ASSOCIATED CHEMISTS, INC.
4401 S.E. Johnson Creek Blvd.
Portland, Oregon 97222
(503) 659-1708

MATERIAL SAFETY DATA SHEET

PRODUCT NAME: 853-R Resin Cleaner
PRODUCT CODE: 3041

EFFECTIVE DATE: 11-02-88

SECTION I - PRODUCT IDENTIFICATION

PRODUCT CLASS: WATERBASE CLEANING COMPOUND
HAZARD CLASSIFICATION: Combustible liquid

SECTION II - HAZARDOUS INGREDIENTS

INGREDIENT	CAS #	TLV	PERCENT
2-Butoxyethanol	111-76-2	25 ppm (skin)	11
Sodium silicate	6834-92-0	10 mg/m^3	2

SECTION III - PHYSICAL DATA

pH: 11.9
BOILING POINT: 212 °F
VAPOR PRESSURE (mm Hg): Not determined.
SPECIFIC GRAVITY: 1.041
VAPOR DENSITY (air = 1): Not determined.
PERCENT VOLATILES: Not applicable.
EVAPORATION RATE (n-BuAc = 1): 0.3
SOLUBILITY IN WATER: Completely soluble.
APPEARANCE AND ODOR: Blue liquid, glycol ether odor.

SECTION IV - FIRE AND EXPLOSION DATA

FLASH POINT (Setaflash Closed Tester) : 190 °F
LOWER EXPLOSION LIMIT: Not determined.
EXTINGUISHING MEDIA: Water spray, dry chemical, chemical foam, or carbon dioxide.
HAZARDOUS DECOMPOSITION PRODUCTS: Carbon monoxide and/or carbon dioxide.
SPECIAL FIREFIGHTING PROCEDURES: Use self-contained breathing apparatus with full facepiece.
UNUSUAL FIRE AND EXPLOSION HAZARDS: Never use welding or cutting torch on or near drum, even empty, because product or residue can ignite explosively.

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ASSOCIATED CHEMISTS INC., PORTLAND, OREGON 97222 Ph 503-659-1708

PRODUCT NAME: 853-R Resin Cleaner EFFECTIVE DATE: 11-02-88

SECTION V - HEALTH HAZARD DATA

This product does not contain any substance(s) listed as a carcinogen by NTP, IARC, or OSHA.

PERMISSIBLE EXPOSURE LEVEL: None established

PRIMARY ROUTES OF ENTRY: Ingestion, inhalation, or skin absorption.

EFFECTS OF OVEREXPOSURE (Acute/Short Term): FOR PRODUCT

EYES: Severe irritant - causes burns to eyes.
SKIN: Causes severe irritation and is absorbed through skin.
BREATHING: Causes slight irritation to nose and throat.
SWALLOWING: Ingestion of this material causes burns to the esophagus and could be fatal.

FIRST AID

IF IN EYES: Immediately flush eyes with plenty of water for at least 15 minutes. Call a physician.
IF ON SKIN: Remove contaminated clothing and wash affected skin area with soap and water.
IF SWALLOWED: Do not induce vomiting. Call a physican immediately. Give lemon juice or vinegar in water. Never give anything by mouth to an unconscious person.
IF BREATHED: Remove person to fresh air. If not breathing, give artifical respiration, preferably mouth-to-mouth. If breathing is difficult, give oxygen. Call a physician.

SECTION VI - REACTIVITY DATA

HAZARDOUS POLYMERIZATION: None or won't occur.
STABILITY: Stable
INCOMPATABILITY: Acids, strong oxidizing agents.

SECTION VII - SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS SPILLED OR RELEASED:

SMALL SPILLS: Flush small quantities to sewer.

LARGE SPILLS: Contain spilled material immediately. Prevent spill from entering the sewer system. Use an inert material (sawdust/kitty litter/sand/etc.) to absorb spilled material.

WASTE DISPOSAL METHOD:

Product must be disposed of properly under federal/state regulations for industrial waste.

TEMPLEX (a division of)
ASSOCIATED CHEMISTS INC., PORTLAND, OREGON 97222 Ph 503-659-1708

PRODUCT NAME: 853-R Resin Cleaner EFFECTIVE DATE: 11-02-88

SECTION VII - SPILL OR LEAK PROCEDURES (conti.)

This product when spilled or disposed of is a non-hazardous waste as defined in RCRA regulations (40 CFR 261).

SECTION VIII - PROTECTIVE EQUIPMENT TO BE USED

RESPIRATORY PROTECTION: Use approved MSHA or NIOSH respirator for organic vapors.
VENTILATION: Use adequate ventilation to keep airbone concentrations below the exposure standard.
PROTECTIVE GLOVES: Neoprene rubber gloves recommended.
EYE PROTECTION: Wear approved splashproof chemical goggles.
OTHER PROTECTIVE EQUIPMENT: None normally required

SECTION IX - SPECIAL PRECAUTIONS - LABELING - OTHER COMMENTS

Containers of this material may be hazardous when emptied. Since emptied containers retain product residues (vapor, liquid, and/or solid), all hazard precautions given in this data sheet must be observed.

HAZARDOUS MATERIALS IDENTIFICATION SYSTEM LABELING:

HMIS Label	
Health	2
Flammability	2
Reactivity	0
Personal Protection	

Relative Degree of Hazard
0 - Minimal hazard
1 - Slight hazard
2 - Moderate hazard
3 - Serious hazard
4 - Severe hazard

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EXECUTIVE SUMMARY: Municipality of Metropolitan Seattle's Determination of Acceptance

In mid-August, 1988, the Templex Company arranged for a sample of used 853-R resin cleaner to be analyzed for its contents. After a day and a half of production in a California tank manufacturing facility a pail of spent emulsifier was removed from the shop, allowed to settle and "air" in an open container, and was delivered the next day to Core Labratories for testing.

The results of Core's tests were delivered to Ray Carveth, a veteran Industrial Waste Investigator for the Municipality of Metropolitan Seattle, to determine whether similar Templex resin cleaner generated by FRP shops in the Seattle area could be legally disposed of in the sanitary sewer system.

Metro's review of the test data is very favorable for the fiberglass industry. After a manufacturer notifies Metro and gains approval, spent solutions of Templex 853-R used to clean fiberglass resins may be disposed of in the sanitary sewers of Metro, Seattle. The solution must be allowed to settle and in some cases simple carbon filtration may be required prior to disposal.

Metro's Determination of Acceptance is reprinted on the following pages.

A Division of ASSOCIATED CHEMISTS, INC.
4401 SE Johnson Creek Blvd. • Portland, OR 97222 • (503) 653-9734 1-800-554-4666

METRO
Municipality of Metropolitan Seattle
Exchange Building • 821 Second Ave. • Seattle, WA 98104-1598

January 12, 1989

Mr. Andy Garrett
Templex
4401 S.E. Johnson Creek Blvd.
Portland, Or. 97222

Dear Mr. Garrett

DETERMINATION OF ACCEPTANCE

This letter is in response to our recent conversations regarding the proposed disposal of liquid industrial wastes. It is my understanding that these wastes will be generated by the fiberglass manufacturing industry during the cleaning of their equipment with your product #835 - R.

I asked you to provide me with test data from a sample taken at a company using your product rather than the theoretical calculations so often included with these types of requests. I further requested that you include a brief description of the company and process that was tested. I did not request that you make it a "blind" test in which the employees using the product were not told a test was being conducted. However in choosing that approach you have given more creditability to the test results.

Metro supports the Washington State Department of Ecology goals of waste minimization, stressing the need to eliminate, recycle, or reduce hazardous wastes where possible. In reducing the amount of hazardous waste produced by companies manufacturing fiberglass products your product also supports those goals.

Test data review

My comments are based upon the August 15, 1988 test results listed in the September 7, 1988 letter to Templex from Core Laboratories, Certificate #: A88-080023.

pH

The pH of the sample (8.8) is well within Metro limits.

HEAVY METALS

All listed heavy metal concentrations are well within the Metro limits and therefore are acceptable. For your reference a copy of the Metro general discharge limits have been included with this letter.

VOLATILE ORGANIC COMPOUNDS

**** Non-regulated compounds ****

Styrene

770 ppm - this compound is not regulated by Metro. Styrene is consistent with the sample being stored in a plastic container.

Limonene

51 ppm - this compound is not regulated by Metro

**** Compounds regulated by Metro due to treatability ****

The compounds listed here will be reviewed on a case by case basis.

Acetone

54 ppm - this level is generally acceptable to discharge to the Metro system

2-Butanone (MEK)

26 ppm - this level is generally acceptable to discharge to the Metro system

Xylene

15 ppm - this compound is monitored due to its flammability. This level is generally acceptable to the Metro system

**** Compounds regulated as a TTO (Total Toxic Organics) ****

1,2 - Dichloropropane	35 ppm
Toluene	1 ppm
Ethyl Benzene	5 ppm
TOTAL	41 ppm

The determination of acceptance for TTO and Metro regulated compounds is established on an individual company basis and is based on the total concentration value intended for discharge (in this case 41ppm), the total volume to be discharged, the location of the company in relationship to our treatment plants and whether or not the company is using Best Available Technology (BAT) in the treatment of their waste.

Based on the sample data you have provided, the type of industry, and the intended volume to be discharged, the waste from this operation would be acceptable to the Metro system at this time.

We are currently reviewing our discharge limits. It is possible that we will establish organic limits which are below the levels shown in your test.

I have discussed this situation with our Trace Organics Lab staff and with our Industrial Waste Specialist. The consensus of opinion is that with TTO levels as low as the ones shown in your testing, lower levels should be relatively simple to achieve using the Best Available Technology methodology an example of which may be using a carbon filter canister or by allowing additional settling.

Within Washington State any company wishing to discharge the liquid portion of this, or any other industrial waste, to the sanitary sewer system must make prior arrangements with the Public Owned Treatment Works (POTW). Failure to make those arrangements can lead to monetary penalties and having the company name listed in the local newspapers as being in violation of environmental regulations.

The following basic Metro requirements need to be shared with the companies that use your product. The Industrial Waste Section will assist those companies with any questions they may have regarding industrial discharges to the Metro sanitary sewer system. Our phone number is 684-2300.

Metro requirements

* Prior to discharge the company must have a completed Waste Discharge Permit Application on file with Metro. To obtain this one page form call the Metro Industrial Waste Section at 684-2300.

* The industrial waste being discharged must meet the Metro limits for that type of industry. Fiberglass manufacturing is regulated under the Metro general limits, a copy of which are attached to this letter.

* Companies discharging more than 25,000 gallons per day or are listed in the Federal Categorical Standards will receive a permit, the 1989 fee for this document is $960.00.

* Companies discharging less than 25,000 gallons per day will receive a Discharge Authorization or Letter of Authorization, there are no fees for these documents.

* Spill control will be required, simple berms or containments will be adequate for this waste.

* Metro Industrial Waste personnel will have the right to inspect this site and or sample this waste stream during the normal working hours of the company.

If I can be of further assistance please contact me at 684-2326.

Sincerely

Raymond A. Carveth
Industrial Waste Investigator
Comprehensive Planning Division

RAC:mwr