ILLINOIS POLLUTION CONTROL BOARD

IN THE MATTER OF:	)	
	)	AS 04-01
PETITION OF CROWNLINE BOATS, INC.	)	(Adjusted Standard)
FOR AN ADJUSTED STANDARD FROM 35	)	
ILL. ADM. CODE 215.301	)	

RESPONSES OF CROWNLINE BOATS, INC.
TO QUESTIONS IN HEARING OFFICER ORDER OF APRIL 6, 2004

To facilitate the Board's decision on this adjusted standard, the hearing officer issued an Order, dated April 6, 2004, which set forth several questions which the Petitioner should be prepared to answer at the hearing set for April 23, 2004. Petitioner has prepared the following responses to the questions set forth in the April 6, 2004 Order. For convenience, Petitioner has also set forth below the questions from the April 6, 2004 Order with Petitioner's response (in italics) to each question immediately following

AS 2004-1 Crownline Boat, Inc.

35 IAC 104.406 (e)

1. In the Federal Register, USEPA estimates there are approximately 119 existing facilities that will be subject to the Federal rule 40 CFR 63 Subpart VVVV. Annual compliance costs for all existing facilities were estimated at $14 million. This included capital, materials, monitoring, recordkeeping, and reporting costs. [66 FR 44222] Pet. at 8 notes that USEPA estimates that complying with 40 CFR Subpart VVVV will cost $4060/ton of HAP reduced /year.

USEPA also estimated the capital costs for new equipment:

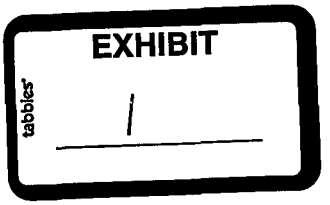
- Resin Application Equipment (flowcoaters): **$6000 / unit**
- Adhesive application Equipment: **$6000 / unit**
- Resin and Gel Coat Mixer Covers: **$180 / container**

[66 FR 44222]

(a) Would you please quantify the costs Crownline has spent on replacing the atomized spray guns with flow-coat guns and switching to a lower styrene resin? Crownline has already made the change in the lamination process. Does Crownline consider switching to flow-coat guns in the gel coat process an alternative as well?

(b) What other costs has Crownline incurred to meet the Federal rule?

(c) Has Crownline estimated the additional compliance costs associated with monitoring, recordkeeping and reporting?



RESPONSE:

(a) *Crownline incurred a capital cost of $96,000 in replacing the atomized spray guns in its lamination areas with flow-coat guns. Crownline experimented with using flow-coat guns in the gelcoat process, but they had too much of a negative impact on product quality.*

(b) *Crownline has had to incur an additional $4000 per week in labor costs in the lamination area for additional personnel to do roll out and touch up on the boats in order to maintain the same product quality while using the lower styrene resins. Crownline has also incurred over$80,000 in outside consulting fees and expenses.*

(c) *It is estimated that it will cost Crownline approximately $7500 to complete the software needed to allow computer aided ongoing compliance reporting and recordkeeping under the MACT and to prepare the MACT initial compliance certification. The monthly cost for calculating the 12 month rolling average compliance demonstration required by the MACT is estimated at approximately $500 per month.*

In total, Crownline anticipates its annual compliance costs to be approximately $215,600 per year. This is calculated by multiplying the additional labor costs ($4000 per week) by 50 weeks to equal an amount of $200,000. To this amount is then added $6000 (for the $500 needed each month to do recordkeeping and reporting) and $9600 (which is the $96,000 capital cost for replacing the atomized guns with flow coat guns, annualized over 10 years) for a total of $215,600.

2. Pet. at 2 states, "Crownline took steps early to comply with the [Federal] MACT and came into compliance with the MACT emission limits more that a year prior to the deadline." (Pet. at 2.) Further down on that same page, the Petition states that the costs to install tail-stack controls to comply with the 8 lb/hr Rule would range from approximately $7 million to $14 million and that "This equates to approximately $35,000 to $58,000 per ton of pollutant removed on top of the costs Crownline **will** have to incur to comply with the newly promulgated MACT standard." (Emphasis added.) (Pet. at 2.)

(a) Would you please clarify whether Crownline has already incurred costs to come into compliance with the Federal standard? If so, what was the cost incurred to comply with the Federal standard? Does Crownline expect to incur additional costs?

(b) Could you please calculate a total cost / ton HAP reduced / year that Crownline will incur as a result of complying with 40 CFR Subpart VVVV.

RESPONSE:

(a) *See response to Question 1.*

(b) *Crownline estimates that the annual amount of HAPs (not total VOM) reduced by complying with the MACT is approximately 50 tons per year. Based upon Crownline's estimate of $215,600 for additional annual operational costs (as discussed in response to Question 1above), this would equate to $4,312 /ton of HAP reduced / year ($215,600 per year ÷ 50 tons).*

35 IAC 104.406 (f)

3. Petition at 2 states, "Crownline took steps early to comply with the MACT and came into compliance with the MACT emission limits more than a year prior to the deadline." Pet. at 2.

(a) Could you please indicate if Crownline has made a demonstration of compliance with the new NESHAP regulations under 40 CFR Part 64 Subpart VVVV to USEPA yet? Did USEPA respond to the compliance demonstration, and if so, how?

(b) Since Crownline is proposing replacing the 1-hour averaging time under the 8 lb/hr rule, would you please describe over what time period emissions will be averaged under 40 CFR Subpart VVVV? Since the boat-building process takes an average of 22 days, would it be technically feasible and economically reasonable to average emissions on a 1-day, 7-day or 30-day rolling average instead of a 12-month rolling average? Would this help to more closely monitor the daily and seasonal impact of the emissions that the 1-hour averaging required under the 8 lb/hr rule?

RESPONSE:

(a) *Crownline has not made a demonstration of compliance. This will not be due until August 2005.*

(b) *The new MACT standard requires that for the "model point value averaging option" (which Crownline plans to use to demonstrate compliance with the MACT), compliance is to be demonstrated on a 12-month rolling average. Having to demonstrate compliance for a time period shorter than on a 12-month rolling average would be technically and economically unreasonable. First, this would place Crownline at a significant competitive disadvantage versus its competitors in other states and would make its current way of doing business impossible. Crownline does not maintain a large inventory of boats, but has built its business and reputation on allowing customers to order customized boats, offering a full array of potential options, styles and colors a customer can choose*

from. To be able to offer this service to customers, Crownline has to build its boats quickly and deliver them to the customer on an expedited basis. Having to demonstrate compliance on a time frame less than on a 12-month rolling average would make Crownline's entire method of business next to impossible. For example, if Crownline had to demonstrate compliance on a 30-day rolling average, there may be months were Crownline would have to tell its customers that they could not get certain boat models that month. Second, having to demonstrate compliance on a time frame less than a 12-month rolling average would also greatly increase Crownline's time and expense in monitoring its compliance as compared to its competitors. Even if compliance was to be demonstrated on a 30-day rolling average, it would essentially mean that compliance would have to be monitored on a daily basis, which would be an extremely time and labor intensive undertaking. It is important to note that in developing the new MACT standard, EPA contemplated requiring a shorter time period than 12 months to demonstrate compliance but chose to use the 12-month rolling average.

4. Petition at 3 quotes the definition of "emission source" from 35 IAC 201.102 as "any equipment or facility of a type capable of emitting specified air contaminants to the atmosphere." The Petition's Technical Document in Appendix 5 is a letter from Crownline's environmental consultant to IEPA seeking to resolve the issue of properly defining the term "emission source" for purposes of applying the 8 lb/hr rule.

(a) Could you please explain how Crownline is regulated under 35 IAC 215.301 in the context of the definition of "emission source." Is the whole facility regulated as one source or do individual sources exist within the facility that are regulated as separate sources? Could you please identify the individual emission source/s at Crownline regulated under 35 IAC 215.301? Is each boat line or model line considered an emission source? Is the process of building each boat considered an emission source? Is each spray gun considered an emission source?

(b) IEPA's recommendation (1-22-04) included one condition relating to testing which Crownline found vague and overly broad. In Crownline's Response to the Recommendation of the Illinois EPA, Crownline suggests the two parties might reach a compromise on this language in time for hearing. Could you please provide an update on this?

RESPONSE:

(a) *IEPA has directed Crownline to consider the boat part (e.g., hull, deck, etc.) as the "emission source" for purposes of complying with 35 IAC 215.301.*

(b) *Crownline and IEPA have reached a compromise on the language and conditions of the proposed adjusted standard. Attached is a copy of the proposed language and conditions of the adjusted standard to which Crownline and IEPA have agreed.*

35 IAC 104.406 (g)

5. The Technical Document prepared by AEA on page 7 states, "Estimates of hourly VOM emissions from Crownline's gelcoat and lamination operations in compliance with the MACT are set forth in Exhibit 4 of Appendix 6." However, Exhibit 4 of Appendix 6 seems to show the annual total emissions in tons per year (tpy) rather than estimates of the total emissions on an hourly basis in pounds per hour (lb/hr). Appendix 7 shows estimates of hourly VOM emissions (lb/hr), but only from the caulking, adhesive and lacquer operations.

(a) Could you please provide data in a format similar to Appendix 7 in lb/hr for the gelcoat and lamination operations for the sake of comparison to the 8 lb/hr rule?

(b) Appendix 8 of the Technical Document contains a table entitled "Crownline Small Part Usage in Pounds of Material; MACT Compliance Scenario." Could you please specify the units of measurement for each column in the table?

RESPONSE:

(a) *When Crownline originally began preparing the Technical Document, Crownline planned to include several charts Crownline had developed using 2000 data showing estimated hourly emissions for the lamination and gelcoat areas broken down by boat model. However, these emission estimates were based upon preliminary materials usage data which was available at that time, but which Crownline later discovered had overestimated VOM emissions. Because Crownline knew these emission estimates did not best reflect the emissions from these operations, Crownline decided not to include the estimates in the Technical Document filed in December 2003. The language quoted from the Technical Document in Question 5 above, should have been deleted from the final version of the Technical Document. Crownline apologizes for this oversight. However, we are attaching these charts to this Response (identified as Exhibits 1 through 6) with appropriate caveats concerning the data. Since preparing these charts, Crownline has gone back and estimated hourly VOM emissions for a few boat models using more accurate materials usage data. Although these calculations confirmed that the estimates from 2000 overestimated emissions, there are still a significant number of boat models which would have emissions greater than 8 lb/hr, when VOM emissions are determined on strict hourly basis.*

(b) *Attached is a revised copy of the table with the units of measurement included.*

6. The Federal NESHAP regulations at 40 CFR 63.5698 provide a formula to calculate the HAP emission limit based on a 12-month rolling average.

(a) Would you please identify Crownline's HAP Emission Limit per 40 CFR 63.5698 and show how Crownline calculated it.

RESPONSE:

(a) *The HAP emission limit will vary from month to month based upon the equation set forth in 40 CFR 63.5698. Attached are monthly spread sheets from September 2003 through March 2004 showing the calculated HAP emission limits and the HAP emissions for Crownline for those months.*

7. Pet. at 2 references USEPA's discussion of the NESHAP for Boat Manufacturing in the Federal Register [66 FR 44222]. Referring to the Federal Register discussion, USEPA provides the following figures:

- Existing facilities: **119**
- Rate of growth: **5 facilities / year for next 5 years**
- 1997 baseline emissions: **9920 tpy**
- NESHAP reductions: **3450 tpy**
- % total reduction in HAP: **35%**
- Total Annual Compliance Costs: **$14 million**
- Annual Costs: **$4060 / ton HAP reduced**
- Capital costs:
  - Resin application equipment: **$6000 / unit**
  - Adhesive application equipment: **$6000 / unit**
  - Resin and gel coat mixer covers: **$180 / year / container**

[66 FR **44222**]

Based on these figures, the following averages can be calculated:

- 1997 baseline emissions: 9920 tpy/119 facilities = **83.4 tpy/facility**
- NESHAP emissions reductions: (9920-3450 tpy)/119 facilities = **54.4 tpy/facility**
- Annual Compliance Costs: $14 million / 119 facilities = **$117,647/facility**
- % total reduction in HAP: **35%**

(a) Could you please make a relative comparison of Crownline's figures to the averages calculated above:

1. How do Crownline's 2003 Pre-MACT emissions compare to the average of the facilities as depicted above?

2. How do Crownline's proposed NESHAP emissions reductions compare to the average of the facilities above?

3. How do Crownline's annual compliance costs compare with the average of the facilities above?

4. How does Crownline's annual cost of reduced HAP compare to the USEPA figure of $4060 / ton?

5. Comparing the Pre-MACT Scenario to the MACT Standard Compliance Scenario presented as Exhibits 3 and 4 in Appendix 6 of the Technical Document, would you please estimate the % reduction in total HAP emissions. Comparing the Pre-MACT Scenario to the 8 lb/hr Compliance Scenario presented in Exhibits 3 and 5, would you please estimate the % reduction in total HAP emissions. Would you please compare these % reduction figures to the 35% overall figure that USEPA estimated? If the % reduction proposed by Crownline for this adjusted standard is less than 35%, are there additional measures Crownline could take to improve its reduction to more closely approach the 35%? If you are familiar with other affected facilities in the boat manufacturing industry, could you please comment on how closely their reductions approach USEPA's anticipated overall percent reduction of 35%?

(b) If Crownline were to experience a growth in production, could you please comment on how such growth would affect the VOM emissions:

1. Could you please estimate on an hourly and annual basis how potential growth would affect VOM emissions in comparison to the data provided for the 2003 production year? I.e.- would Crownline add new production lines? Increase hours/day of production? Build a new facility?

2. By estimating a larger figure to represent potential increased VOM emissions 5 to 10 years in the future, how would the Ozone Impact Analysis conducted by AEA change in showing an exceedence at the local air monitor?

3. Would such potential increased VOM emissions from Crownline's operations require IEPA to return to USEPA for another SIP revision?

RESPONSE:

(a)

1. *Crownline's Pre-MACT emissions were approximately 204 tons of HAPs per year as compared to 83.4 tons/year which is the average facilities mentioned above. Obviously the amount of total emissions of HAPs per year will vary depending upon the number and size of the boats produced. Crownline produces more boats (or larger boats) than the average of the facilities mentioned above.*

2. *Crownline estimates it HAP emission reductions at approximately 50 tons/year, as compared to 29 tons/year which is the average of the facilities mentioned above.*

3. *Crownline's annual compliance costs are estimated at $215,600 (see response to Question 1) as compared to $117,647 for the average of the facilities mentioned above.*

4. *Crownline's annual compliance cost (not including the initial capital expenditures) is approximately $4,312/ton of HAP reduced, which is very similar to the $4060/ton for the average of the facilities mentioned above.*

5. *Crownline estimates its percent reduction in total HAP emissions at approximately 25% as compared to the 35% estimated by U.S. EPA. It should be noted that EPA's estimate was merely an estimate of what the anticipated reduction would be and Crownline is not aware of what actual reductions other companies are experiencing. At this time, it is impossible to know whether Crownline's percent reduction is similar to or even greater than actual reductions experienced by other companies. More importantly, in order to do a meaningful comparison of percent HAP reductions, it would first have to be determined what the baseline levels were. In other words, if the average company was using resins and gelcoats with a high HAP content, their percent reduction when they begin to comply with the MACT will be higher. As a result, without knowing the baseline, it is difficult to compare the percent reduction in HAP emissions between Crownline and the average of the facilities mentioned above.*

   Crownline has agreed to a proposal by IEPA that as a condition of this adjusted standard, Crownline will continue to investigate boat production methods with a reduced VOM content and, where practicable, will substitute current coatings with lower VOM content coatings. Crownline will also conduct any test of new technologically or economically reasonable production methods or materials applicable to the open-mold fiberglass boat manufacturing industry which may reduce VOM emissions at Crownline's facility which IEPA requests.

(b)

1. *Crownline's CAA Title V Permit limits Crownline's annual emissions to 249 tons of VOM per year. As a result, if Crownline wished to significantly expand it current production, it would most likely need to obtain a permit amendment. At present, Crownline does not have any present plans to increase its production capacity above the 249 ton permit limit. Since Crownline does not have any present expansion plans, it has not estimated on an hourly or annual basis how potential growth would affect VOM emissions.*

2. *In response to this question, Crownline reviewed its Ozone Impact Analysis and the effect on ozone which would occur if Crownline were to significantly increase its VOM emissions. In short, Crownline could more than triple its current annual VOM emissions without causing an exceedence of the 1-hour ozone NAAQS.*

3. *IEPA has requested, and Crownline has agreed to, a condition in the adjusted standard that the adjusted standard be limited to the emission activities at the Crownline West Frankfort, Illinois facility as of the date of the issuance of the adjusted standard. Crownline understands this restriction to mean that Crownline will be able to increase production at its facility by increasing the hours/days of production and will be able to build new boat models and/or change the mix of boat models from what is currently being constructed without having to seek a new or amended adjusted standard. However, Crownline would be required to obtain a new or amended adjusted standard (and therefore a new SIP revision) if Crownline wishes to add new production lines or build a new facility which would have emissions greater than 8 lbs per hour from any emission source.*

Respectfully Submitted,

BRYAN CAVE LLP

By: _____

Dale A. Guariglia, MO Bar #32988
One Metropolitan Square
211 North Broadway, Suite 3600
St. Louis, Missouri 63102
Tel. (314) 259-2000
Fax. (314) 259-2020

Attorneys for Crownline Boats, Inc.

April 23, 2004

CROWNLINE BOATS, INC.

REVISED ADJUSTED STANDARD LANGUAGE

As an alternative to compliance with the 8 lb/hr Rule found at 35 IAC § 215.301, this adjusted standard allows Crownline to limit its discharge of organic material into the atmosphere from its boat manufacturing operations by operating in full compliance with the National Emission Standard for Hazardous Air Pollutants for New and Existing Boat Manufacturing Facilities, set forth at 40 CFR §63 Subpart VVVV, as may be amended in the future, and with the following conditions:

a. Crownline shall continue to investigate boat production methods with a reduced VOM content and, where practicable, shall substitute current coatings with lower VOM content coatings as long as such substitution does not result in a net increase in VOM emissions. Crownline shall be required to do any reasonable test of new technologically or economically reasonable production methods or materials applicable to the open-mold fiberglass boat manufacturing industry which may reduce VOM emissions at Crownline's facility which the Illinois EPA Bureau of Air specifically requests in writing that they do. An annual report summarizing the activities and results of these investigatory efforts shall be prepared by Crownline and submitted to the Illinois EPA Bureau of Air, Compliance and Enforcement Section.

b. The relief granted in this proceeding shall be limited to the emission activities at the Crownline West Frankfort facility as of the date of this filing

c. Nothing in this adjusted standard shall relieve Crownline of its duty to operate in full compliance with the Clean Air Act, its CAAPP, the Illinois Environmental Protection Act and other applicable regulations not otherwise discussed herein.

Exhibit 1
Crownline Boats, Inc. - West Frankfort, Illinois

Estimates of Resin and Gelcoat Usage Amounts Per Boat Model

Boat Model[1]	Resin[2]							Gelcoat[3]	
	Decks[4]			Hulls[4]					
	1st Skin[5] (lbs)	2nd Skin[5] (lbs)	3rd Skin[5] (lbs)	1st Skin[5] (lbs)	2nd Skin[5] (lbs)	3rd Skin[5] (lbs)	Floor[6] (lbs)	Deck[4] (lbs)	Hull[4] (lbs)
180 BR	68	107	8	98	145	0	128	35	45
180 CD	67	99	7	98	145	0	128	30	45
192 BR	163	199	4	112	175	0	180	40	55
202 BR	87	127	4	120	214	0	198	45	55
205 BR	143	184	0	116	199	0	208	75	60
205 CC	96	127	4	116	199	0	252	40	60
212 DB	196	262	10	150	261	0	325	95	70
215 CD	176	208	4	141	218	0	260	86	70
225 BR	108	137	17	130	262	0	232	50	65
225 CD	99	147	4	130	262	0	245	50	65
230 BR	153	221	0	147	313	0	273	103	70
230 CD	173	263	0	147	313	0	273	95	70
238 DB	198	264	16	146	295	0	324	105	80
239 DB	153	221	16	146	295	0	324	105	80
242 CD	174	246	0	221	339	249	281	95	90
248 BR	130	170	14	154	284	0	247	60	85
248 CD	191	247	14	152	284	0	246	100	85
262 CR	202	299	0	180	312	309	345	115	92
262 CD	199	264	0	NA	NA	NA	NA	120	92
266 BR	154	201	16	165	287	0	290	70	80
266 CC	200	264	19	165	288	0	361	125	80
266 LTD	174	243	57	165	287	0	320	125	80
288 BR	263	295	0	252	426	390	433	145	95
290 CR	277	367	1	301	516	411	405	150	115

Footnotes:

[1]The list of boat models produced by Crownline changes annually depending on customer demands. However, this list reasonably represents the types and sizes of boats made by Crownline in 2000.

[2]The production resin used at Crownline is of one type and from one supplier. Resin is applied to the part after the gelcoat layer has been applied and has cured. As resin is released at the gun tip, it mixes with chopped fiberglass that is simultaneously fed to the gun tip area.

[3]Gelcoat is applied to the boat mold to give it the outer shiny appearance and color. It is applied before the resin is applied.

[4]A deck is the top portion of the boat that lays on top of the hull. A hull is the base portion of the boat (has contact with the water)

[5]A skin is one layer of gelcoat or resin applied to the deck or hull. In lamination, more than one skin is applied to reach the desired fiberglass/resin layer thickness for the given boat model. Only one layer is applied during the gelcoat operation.

[6]A floor is the decking installed in a hull to house and protect the gasoline storage tank(s) and floatation foam.

NA = not applicable

NOTE: The data in this chart may not be accurate. It was prepared using 2000 data and is based upon material usage amounts in "standard bills of materials" (BOM) developed to provide a basis for establishing the sale price for each boat model. To ensure that the price is set at an amount that adequately covers Crownline's costs for producing the boat plus a desired profit margin, the BOM overestimates the amounts of materials used to build each boat model.

Exhibit 2 - Resin and Gelcoat Application Time

Boat Model	Resin Application Time (hours)							Gelcoat Application Time (hours)	
	Decks			Hulls					
	1st Skin	2nd Skin	3rd Skin	1st Skin	2nd Skin	3rd Skin	Floor	Deck	Hull
180 BR	1	1	1	1	1	1	1	1	1
180 CD	1	1	1	1	1	1	1	1	1
192 BR	1	1	1	1	1	1	1	1	1
202 BR	1	1	1	1	1	1	1	1	1
205 BR	1	1	1	1	1	1	1	1	1
205 CC	1	1	1	1	1	1	1	1	1
212 DB	1	1	1	1	1	1	1	1	1
215 CD	1	1	1	1	1	1	1	1	1
225 BR	1	1	1	1	1	1	1	1	1
225 CD	1	1	1	1	1	1	1	1	1
230 BR	1	1	1	1	1	1	1	1	1
230 CD	1	1	1	1	1	1	1	1	1
238 DB	1	1	1	1	1	1	1	1	1
239 DB	1	1	1	1	1	1	1	1	1
242 CD	1	1	1	1	1	1	1	1	1
248 BR	1	1	1	1	1	1	1	1	1
248 CD	1	1	1	1	1	1	1	1	1
262 CR	1	1	1	1	1	1	1	1	1
262 CD	1	1	1	1	1	1	1	1	1
266 BR	1	1	1	1	1	1	1	1	1
266 CC	1	1	1	1	1	1	1	1	1
266 LTD	1	1	1	1	1	1	1	1	1
288 BR	1	1	1	1	1	1	1	1	1
290 CR	1	1	1	1	1	1	1	1	1

Exhibit 3
Crownline Boats, Inc. - West Frankfort, Illinois

VOM Content of Listed VOM/HAP Containing Materials Used at Crownline

Boat Model	VOM Content[1]						
	Resin	Gelcoat			Lacquer	Adhesive	Caulking
	Styrene%	Styrene %	MMA%[2]	Other%	VOM %	VOM%	VOM%
180 BR	42.3	27	6	0.154	71	19	9
180 CD	42.3	27	6	0.154	71	19	9
192 BR	42.3	27	6	0.154	71	19	9
202 BR	42.3	27	6	0.154	71	19	9
205 BR	42.3	27	6	0.154	71	19	9
205 CC	42.3	27	6	0.154	71	19	9
212 DB	42.3	27	6	0.154	71	19	9
215 CD	42.3	27	6	0.154	71	19	9
225 BR	42.3	27	6	0.154	71	19	9
225 CD	42.3	27	6	0.154	71	19	9
230 BR	42.3	27	6	0.154	71	19	9
230 CD	42.3	27	6	0.154	71	19	9
238 DB	42.3	27	6	0.154	71	19	9
239 DB	42.3	27	6	0.154	71	19	9
242 CD	42.3	27	6	0.154	71	19	9
248 BR	42.3	27	6	0.154	71	19	9
248 CD	42.3	27	6	0.154	71	19	9
262 CR	42.3	27	6	0.154	71	19	9
262 CD	42.3	27	6	0.154	71	19	9
266 BR	42.3	27	6	0.154	71	19	9
266 CC	42.3	27	6	0.154	71	19	9
266 LTD	42.3	27	6	0.154	71	19	9
288 BR	42.3	27	6	0.154	71	19	9
290 CR	42.3	27	6	0.154	71	19	9

[1]Based on Material Safety Data Sheets available in 2000.
[2] MMA - Methyl Methacrylate

Exhibit 4
Crownline Boats, Inc. - West Frankfort, Illinois
Emission Factors[1] Used To Compute Crownline's Resin and Gelcoat VOM Emissions

	VOM Emission Factors[1]					
Boat Model	**Resin**		**Gelcoat**			
	Styrene %	Styrene %	Styrene%		MMA%	
	Deck	Hull	Deck	Hull	Deck	Hull
180 BR	17.6	18.2	42.3	46.4	100	100
180 CD	17.6	18.2	42.3	46.4	100	100
192 BR	17.85	18.45	42.3	46.8	100	100
202 BR	18.1	18.7	42.3	47.2	100	100
205 BR	18.1	18.7	42.3	47.2	100	100
205 CC	18.1	18.7	42.3	47.2	100	100
212 DB	18.35	18.95	42.3	47.6	100	100
215 CD	18.35	18.95	42.3	47.6	100	100
225 BR	18.6	19.2	42.3	48	100	100
225 CD	18.6	19.2	42.3	48	100	100
230 BR	18.85	19.45	42.3	48.4	100	100
230 CD	18.85	19.45	42.3	48.4	100	100
238 DB	18.85	19.45	42.3	48.4	100	100
239 DB	18.85	19.45	42.3	48.4	100	100
242 CD	19.1	19.7	42.3	48.8	100	100
248 BR	19.1	19.7	42.3	48.8	100	100
248 CD	19.1	19.7	42.3	48.8	100	100
262 CR	19.6	20.2	42.3	49.6	100	100
262 CD	19.6	20.2	42.3	49.6	100	100
266 BR	19.6	20.2	42.3	49.6	100	100
266 CC	19.6	20.2	42.3	49.6	100	100
266 LTD	19.6	20.2	42.3	49.6	100	100
288 BR	20.1	20.7	42.3	50.4	100	100
290 CR	20.35	20.95	42.3	50.8	100	100

[1]VOM emission factors were determined through interpolation of 1997 NMMA study data - represents the percent of compound (i.e., styrene, MMA, etc.) emitted that is available in material as applied.

Exhibit 5
Crownline Boats, Inc. - West Frankfort, Illinois
Estimated VOM Emissions From Plant Gelcoat and Resin Application Operations
Pre-Mact Scenario: 42.3% HAP resin, 43.2% HAP gelcoat, air atomized spray guns1

Boat Model[2]	Resin[3]							Gelcoat[4]	
	Decks[5]			Hulls[5]					
	1st Skin[6] (lb/hr)	2nd Skin[6] (lb/hr)	3rd Skin[6] (lb/hr)	1st Skin[6] (lb/hr)	2nd Skin[6] (lb/hr)	3rd Skin[6] (lb/hr)	Floor[7] (lb/hr)	Deck[5] (lb/hr)	Hull[5] (lb/hr)
180 BR	5.1	8.0	0.6	7.5	11.2	0.0	9.9	6.1	8.3
180 CD	5.0	7.4	0.5	7.5	11.2	0.0	9.9	5.2	8.3
192 BR	12.3	15.0	0.3	8.7	13.7	0.0	14.0	7.0	10.2
202 BR	6.7	9.7	0.3	9.5	16.9	0.0	15.7	7.8	10.3
205 BR	10.9	14.1	0.0	9.2	15.7	0.0	16.5	13.1	11.2
205 CC	7.4	9.7	0.3	9.2	15.7	0.0	19.9	7.0	11.2
212 DB	15.2	20.3	0.8	12.0	20.9	0.0	26.1	16.5	13.2
215 CD	13.7	16.1	0.3	11.3	17.5	0.0	20.8	15.0	13.2
225 BR	8.5	10.8	1.3	10.6	21.3	0.0	18.8	8.7	12.3
225 CD	7.8	11.6	0.3	10.6	21.3	0.0	19.9	8.7	12.3
230 BR	12.2	17.6	0.0	12.1	25.8	0.0	22.5	17.9	13.3
230 CD	13.8	21.0	0.0	12.1	25.8	0.0	22.5	16.5	13.3
238 DB	15.8	21.1	1.3	12.0	24.3	0.0	26.7	18.3	15.3
239 DB	12.2	17.6	1.3	12.0	24.3	0.0	26.7	18.3	15.3
242 CD	14.1	19.9	0.0	18.4	28.2	20.7	23.4	16.5	17.3
248 BR	10.5	13.7	1.1	12.8	23.7	0.0	20.6	10.5	16.3
248 CD	15.4	20.0	1.1	12.7	23.7	0.0	20.5	17.4	16.3
262 CR	16.7	24.8	0.0	15.4	26.7	26.4	29.5	20.0	17.8
262 CD	16.5	21.9	0.0	NA	NA	NA	NA	20.9	17.8
266 BR	12.8	16.7	1.3	14.1	24.5	0.0	24.8	12.2	15.5
266 CC	16.6	21.9	1.6	14.1	24.6	0.0	30.8	21.8	15.5
266 LTD	14.4	20.1	4.7	14.1	24.5	0.0	27.3	21.8	15.5
288 BR	22.4	25.1	0.0	22.1	37.3	34.1	37.9	16.6	12.9
290 CR	23.8	31.6	0.1	26.7	45.7	36.4	35.9	17.1	15.8

Footnotes:
[1]Prior to January 2003, air atomized guns were used for both resin and gelcoat application - but only for gelcoat since then.
[2]The list of boat models produced by Crownline changes annually depending on customer demands. However, this list reasonably represents the types and sizes of boats made by Crownline in 2000.
[3]The production resin used at Crownline is of one type and from one supplier. Resin is applied to the part after the gelcoat layer has been applied and has cured. As resin is released at the gun tip, it mixes with chopped fiberglass that is simultaneously fed to the gun tip area.
[4]Gelcoat is applied to the boat mold to give it the outer shiny appearance and color. It is applied before the resin is applied.
[5]A deck is the top portion of the boat that lays on top of the hull. A hull is the base portion of the boat (has contact with the water)
[6]A skin is one layer of gelcoat or resin applied to the deck or hull. In lamination, more than one skin is applied to reach the desired fiberglass/resin layer thickness for the given boat model. Only one layer is applied during the gelcoat operation.
[7]A floor is the decking installed in a hull to house and protect the gasoline storage tank(s) and floatation foam.
NA = not applicable
Note: For purposes of the above analysis, the terms HAP and VOM are assumed to be interchangeable

NOTE: The data in this chart may not be accurate. It was prepared using 2000 data and is based upon material usage amounts in "standard bills of materials" (BOM) which were developed to provide a basis for establishing the sale price for each boat model. To ensure that the price is set at an amount that adequately covers Crownline's costs for producing the boat plus a desired profit margin, the BOM overestimates the amounts of materials used to build each boat model made by Crownline and therefore overestimates emissions of VOMs and HAPs.

Also, actual versus estimated usages are affected by other factors such as:
- Differences in the efficiency of application from one production crew to another;
- Crownline's application of an average "scrap factor" in the BOM (a percentage of the total to estimate the amount of each material used in the gelcoat and lamination areas of the production process); and
- Humidity of the room air.

Based on the above information, the estimated hourly VOM values shown in Exhibits 5 and 6 are higher than actual emissions. However, they are appropriate for the purpose of making a comparison between the pre-MACT and post-MACT emissions levels, i.e., to estimate a relative percent reduction in VOM emissions from Crownline's boat production operations.

Please also note that this table shows no change in emissions for gelcoat operations between the MACT and pre-MACT scenarios. This is because NMMA data for emissions from gelcoat operations was based strictly on a single data point, i.e., one gelcoat at one HAP content applied to various hull and deck lengths, therefore, the emission factor did not take into account the amount of HAP emission reduction that would result from the use of lower HAP gelcoats. However, it is also important to note that Crownline has reduced the HAP content of two types of gelcoat materials that they used in the largest amounts (opal and moonstone) from an average of approximately 43 percent to 33 percent. Therefore, the actual reduction in HAP (and, therefore, VOM) emissions from Crownline's gelcoat operations are significantly lower than those shown in this table.

Exhibit 6

Crownline Boats, Inc. - West Frankfort, Illinois

Estimated VOM Emissions From Plant Gelcoat and Resin Application Operations

MACT Standard Compliance Scenario: 35% HAP resin, 43.2% HAP gelcoat, flow-coat chopper guns[1]

Boat Model	Resin[3]							Gelcoat[4]	
	Decks[5]			Hulls[5]					
	1st Skin[6] (lb/hr)	2nd Skin[6] (lb/hr)	3rd Skin[6] (lb/hr)	1st Skin[6] (lb/hr)	2nd Skin[6] (lb/hr)	3rd Skin[6] (lb/hr)	Floor[7] (lb/hr)	Deck[5] (lb/hr)	Hull[5] (lb/hr)
180 BR	2.4	3.7	0.3	3.3	4.8	0.0	4.3	6.1	8.3
180 CD	2.3	3.4	0.2	3.3	4.8	0.0	4.3	5.2	8.3
192 BR	5.7	7.0	0.1	3.8	5.9	0.0	6.1	7.0	10.2
202 BR	3.1	4.5	0.1	4.1	7.3	0.0	6.8	7.8	10.3
205 BR	5.1	6.6	0.0	4.0	6.8	0.0	7.1	13.1	11.2
205 CC	3.4	4.5	0.1	4.0	6.8	0.0	8.6	7.0	11.2
212 DB	7.1	9.5	0.4	5.2	9.0	0.0	11.3	16.5	13.2
215 CD	6.4	7.5	0.1	4.9	7.5	0.0	9.0	15.0	13.2
225 BR	4.0	5.0	0.6	4.6	9.2	0.0	8.1	8.7	12.3
225 CD	3.6	5.4	0.1	4.6	9.2	0.0	8.6	8.7	12.3
230 BR	5.7	8.2	0.0	5.2	11.1	0.0	9.7	17.9	13.3
230 CD	6.4	9.8	0.0	5.2	11.1	0.0	9.7	16.5	13.3
238 DB	7.4	9.8	0.6	5.2	10.5	0.0	11.5	18.3	15.3
239 DB	5.7	8.2	0.6	5.2	10.5	0.0	11.5	18.3	15.3
242 CD	6.6	9.3	0.0	8.0	12.2	9.0	10.1	16.5	17.3
248 BR	4.9	6.4	0.5	5.5	10.2	0.0	8.9	10.5	16.3
248 CD	7.2	9.3	0.5	5.5	10.2	0.0	8.9	17.4	16.3
262 CR	7.8	11.6	0.0	6.6	11.5	11.4	12.7	20.0	17.8
262 CD	7.7	10.2	0.0	NA	NA	NA	NA	20.9	17.8
266 BR	6.0	7.8	0.6	6.1	10.6	0.0	10.7	12.2	15.5
266 CC	7.7	10.2	0.7	6.1	10.6	0.0	13.3	21.8	15.5
266 LTD	6.7	9.4	2.2	6.1	10.6	0.0	11.8	21.8	15.5
288 BR	10.4	11.7	0.0	9.5	16.1	14.7	16.4	16.6	12.9
290 CR	11.1	14.7	0.0	11.5	19.8	15.7	15.5	17.1	15.8

Footnotes:

[1]A flowcoat chopper gun applies resin at a low pressure causing the resin to "flow" rather than be atomized into a fine mist-like spray.

[2]The list of boat models produced by Crownline changes annually depending on customer demands. However, this list reasonably represents the types and sizes of boats made by Crownline in 2000.

[3]The production resin used at Crownline is of one type and from one supplier. Resin is applied to the part after the gelcoat layer has been applied and has cured. As resin is released at the gun tip, it mixes with chopped fiberglass that is simultaneously fed to the gun tip area.

[4]Gelcoat is applied to the boat mold to give it the outer shiny appearance and color. It is applied before the resin is applied.

[5]A deck is the top portion of the boat that lays on top of the hull. A hull is the base portion of the boat (has contact with the water)

[6]A skin is one layer of gelcoat or resin applied to the deck or hull. In lamination, more than one skin is applied to reach the desired fiberglass/resin layer thickness for the given boat model. Only one layer is applied during the gelcoat operation.

[7]A floor is the decking installed in a hull to house and protect the gasoline storage tank(s) and floatation foam.

NA = not applicable

Note: For purposes of the above analysis, the terms HAP and VOM are assumed to be interchangeable

NOTE: The data in this chart may not be accurate. It was prepared using 2000 data and is based upon material usage amounts in "standard bills of materials" (BOM) developed to provide a basis for establishing the sale price for each boat model. To ensure that the price is set at an amount that adequately covers Crownline's costs for producing the boat plus a desired profit margin, the BOM overestimates the amounts of materials used to build each boat model made by Crownline and therefore overestimates emissions of VOMs and HAPs.

Also, actual versus estimated usages are affected by other factors such as:
- Differences in the efficiency of application from one production crew to another;
- Crownline's application of an average "scrap factor" in the BOM (a percentage of the total to estimate the amount of each material used in the gelcoat and lamination areas of the production process); and
- Humidity of the room air.

Based on the above information, the estimated hourly VOM values shown in Exhibits 5 and 6 are higher than actual emissions. However, they are appropriate for the purpose of making a comparison between the pre-MACT and post-MACT emissions levels, i.e., to estimate a relative percent reduction in VOM emissions from Crownline's boat production operations.

Please also note that this table shows no change in emissions for gelcoat operations between the MACT and pre-MACT scenarios. This is because NMMA data for emissions from gelcoat operations was based strictly on a single data point, i.e., one gelcoat at one HAP content applied to various hull and deck lengths, therefore, the emission factor did not take into account the amount of HAP emission reduction that would result from the use of lower HAP gelcoats. However, it is also important to note that Crownline has reduced the HAP content of two types of gelcoat materials that they used in the largest amounts (opal and moonstone) from an average of approximately 43 percent to 33 percent. Therefore, the actual reduction in HAP (and, therefore, VOM) emissions from Crownline's gelcoat operations are significantly lower than those shown in this table.

Crownline Boats Emissions From Small Parts Production By Boat Model

MACT Compliance Scenario (Page 1 of 4)

Boat Model	Part Description	Part No.	Appl. Time (Hrs)	Usage Amount (lbs)			VOM Content (Wt. Fraction)			VOM Emission Factor*			VOM Emissions (lbs/hr)	
				Gelcoat	Resin	Catalyst	Gelcoat	Resin	Catalyst	Gelcoat	Resin	Catalyst	Gelcoat	Resin & Catalyst
192 BR w/Liner	Swim Platform	43554	1.00	6.25	40.00	0.83	0.431	0.423	0.03	0.375	0.146	1	1.00	2.5
192 BR w/Liner	Motor Box	43558	1.00	8.00	63.00	1.41	0.431	0.423	0.03	0.375	0.146	1	1.30	3.9
192 BR w/Liner	Box Ft Star/Port	59024	1.00	0.10	17.00	0.60	0.431	0.423	0.03	0.375	0.146	1	0.00	1.1
192 BR w/Liner	Lid, Fuel Tank	61179	1.00	4.00	27.00	0.64	0.431	0.423	0.03	0.375	0.146	1	0.60	1.7
205 BR L Shape	Sundeck	59356	1.00	12.00	79.00	2.20	0.431	0.423	0.03	0.375	0.146	1	1.90	4.9
205 BR L Shape	Dash, Port Side	59357	1.00	8.75	50.00	1.13	0.431	0.423	0.03	0.375	0.146	1	1.40	3.1
205 BR L Shape	Lid, Ladder	59472	1.00	2.50	17.00	0.40	0.431	0.423	0.03	0.375	0.146	1	0.40	1.1
205 CC Super Sport	Lid, Ladder	43505	1.00	2.50	17.00	0.40	0.431	0.423	0.03	0.375	0.146	1	0.40	1.1
212 DB	Lid, Ladder	43505	1.00	2.50	17.00	0.40	0.431	0.423	0.03	0.375	0.146	1	0.40	1.1
212 DB	Lid, Ladder	43553	1.00	1.75	17.00	0.38	0.431	0.423	0.03	0.375	0.146	1	0.30	1.1
212 DB	Door, Head Hatch	59060	1.00	2.00	16.00	0.45	0.431	0.423	0.03	0.375	0.146	1	0.30	1
212 DB	Seat Base	61182	1.00	9.00	46.00	1.43	0.431	0.423	0.03	0.375	0.146	1	1.50	2.9
215 CC Super Sport	Motor Box	43559	1.00	8.00	63.00	1.53	0.431	0.423	0.03	0.375	0.146	1	1.30	3.9
215 CC Super Sport	Helm	59607	1.00	14.00	62.00	1.59	0.431	0.423	0.03	0.375	0.146	1	2.30	3.9
215 CC Super Sport	Door, Cabin	59621	1.00	7.50	38.00	0.88	0.431	0.423	0.03	0.375	0.146	1	1.20	2.4
230 BR L-Shaped 2 Buckets	Lid, Ladder	43560	1.00	1.75	17.00	0.38	0.431	0.423	0.03	0.375	0.146	1	0.30	1.1
230 BR L-Shaped 2 Buckets	Lid, Ladder	43570	1.00	2.00	17.00	0.45	0.431	0.423	0.03	0.375	0.146	1	0.30	1.1
230 BR L-Shaped 2 Buckets	Door, Head Hatch	59611	1.00	3.70	26.00	0.61	0.431	0.423	0.03	0.375	0.146	1	0.60	1.6
230 BR L-Shaped 2 Buckets	Head Comp Liner	59697	1.00	9.00	71.00	1.65	0.431	0.423	0.03	0.375	0.146	1	1.50	4.4
230 CC Super Sport	Lid, Fuel Tank	59358	1.00	3.00	31.00	0.70	0.431	0.423	0.03	0.375	0.146	1	0.50	1.9
230 CC Super Sport	Console	59359	1.00	7.67	55.00	1.30	0.431	0.423	0.03	0.375	0.146	1	1.20	3.4
230 CC Super Sport	Helm	59360	1.00	12.90	65.00	1.63	0.431	0.423	0.03	0.375	0.146	1	2.10	4.1
230 CC Super Sport	Lid, Ladder	59472	1.00	2.50	17.00	0.40	0.431	0.423	0.03	0.375	0.146	1	0.40	1.1
238 DB	Lid, Ladder	43560	1.00	1.75	17.00	0.38	0.431	0.423	0.03	0.375	0.146	1	0.30	1.1
238 DB	Door, Head Hatch	59060	1.00	2.00	16.00	0.45	0.431	0.423	0.03	0.375	0.146	1	0.30	1
238 DB	Seat Base	61182	1.00	9.00	46.00	1.43	0.431	0.423	0.03	0.375	0.146	1	1.50	2.9
239 DB Lshaped Two Buckets	Lid, Ladder	43560	1.00	1.75	17.00	0.38	0.431	0.423	0.03	0.375	0.146	1	0.30	1.1
239 DB Lshaped Two Buckets	Lid, Ladder	43570	1.00	2.00	17.00	0.45	0.431	0.423	0.03	0.375	0.146	1	0.30	1.1
239 DB Lshaped Two Buckets	Door, Head Hatch	59611	1.00	3.70	26.00	0.61	0.431	0.423	0.03	0.375	0.146	1	0.60	1.6
239 DB Lshaped Two Buckets	Seat Base	59612	1.00	6.80	76.00	1.69	0.431	0.423	0.03	0.375	0.146	1	1.10	4.7
239 DB Lshaped Two Buckets	Head Comp Liner	59697	1.00	9.00	71.00	1.65	0.431	0.423	0.03	0.375	0.146	1	1.50	4.4
242 CR 2002 Base Boat	Lid, Ladder	43570	1.00	2.00	17.00	0.45	0.431	0.423	0.03	0.375	0.146	1	0.30	1.1
242 CR 2002 Base Boat	Shower w/Sink	43571	1.00	9.00	64.00	1.51	0.431	0.423	0.03	0.375	0.146	1	1.50	4

* - fraction of VOM (as styrene/MMA) that is emitted based on the amount available in the material as applied.

Boat Model	Part Description	Part No.	Appl. Time (Hrs)	Usage Amount (lbs)			VOM Content (Wt. Fraction)			VOM Emission Factor*			VOM Emissions (lbs/hr)	
				Gelcoat	Resin	Catalyst	Gelcoat	Resin	Catalyst	Gelcoat	Resin	Catalyst	Gelcoat	Resin & Catalyst
242 CR 2002 Base Boat	Shower w/Bottom	43572	1.00	14.34	90.00	2.16	0.431	0.423	0.03	0.375	0.146	1	2.30	5.6
242 CR 2002 Base Boat	Mator Hatch	59613	1.00	6.00	78.00	1.75	0.431	0.423	0.03	0.375	0.146	1	1.00	4.9
242 CR 2002 Base Boat	Helm	59614	1.00	14.00	65.00	1.90	0.431	0.423	0.03	0.375	0.146	1	2.30	4.1
262 CR Base Boat	Motor Hatch	59613	1.00	6.00	78.00	1.75	0.431	0.423	0.03	0.375	0.146	1	1.00	4.9
262 CR Base Boat	Helm	59614	1.00	14.00	65.00	1.90	0.431	0.423	0.03	0.375	0.146	1	2.30	4.1
262 CR Base Boat	Shower w/Sink	59615	1.00	11.34	93.00	2.18	0.431	0.423	0.03	0.375	0.146	1	1.80	5.8
262 CR Base Boat	Shower w/Bottom	59616	1.00	17.70	120.00	2.84	0.431	0.423	0.03	0.375	0.146	1	2.90	7.5
262 CR Base Boat	Top, Shower Marble	59619	1.00	NA	3.00	0.26	0.431	0.423	0.03	0.375	0.146	1	NA	0.2
266 BR Super Sport	Lid, Anchor Storage	43524	1.00	2.50	16.00	0.26	0.431	0.423	0.03	0.375	0.146	1	0.40	1
266 BR Super Sport	Lid, Ladder	43552	1.00	2.50	19.00	0.46	0.431	0.423	0.03	0.375	0.146	1	0.40	1.2
266 CC with Liner	Lid, Anchor Storage	20543	1.00	2.34	20.00	0.46	0.431	0.423	0.03	0.375	0.146	1	0.40	1.2
266 CC with Liner	Lid, Fuel Tank	20570	1.00	4.00	32.50	0.75	0.431	0.423	0.03	0.375	0.146	1	0.60	2
266 CC with Liner	Lid, Ladder	43516	1.00	2.00	17.00	0.45	0.431	0.423	0.03	0.375	0.146	1	0.30	1.1
266 CC with Liner	Helm	43556	1.00	8.40	52.50	1.31	0.431	0.423	0.03	0.375	0.146	1	1.40	3.3
266 CC with Liner	Lid, Ski Locker	43563	1.00	2.40	14.70	0.36	0.431	0.423	0.03	0.375	0.146	1	0.40	0.9
266 CC with Liner	Seat Base	59474	1.00	12.40	75.80	1.82	0.431	0.423	0.03	0.375	0.146	1	2.00	4.7
266 CC with Liner	Wetbar	60610	1.00	2.00	12.60	0.30	0.431	0.423	0.03	0.375	0.146	1	0.30	0.8
266 CC with Liner	Wetbar	60629	1.00	1.84	10.75	0.27	0.431	0.423	0.03	0.375	0.146	1	0.30	0.7
288 BR	Lid, Ladder	43570	1.00	2.00	17.00	0.45	0.431	0.423	0.03	0.375	0.146	1	0.30	1.1
288 BR	Door, Head Hatch	59060	1.00	2.00	16.00	0.45	0.431	0.423	0.03	0.375	0.146	1	0.30	1
288 BR	Sundeck	59362	1.00	16.50	92.40	2.62	0.431	0.423	0.03	0.375	0.146	1	2.70	5.8
288 BR	Door, Head	59364	1.00	3.40	30.00	0.59	0.431	0.423	0.03	0.375	0.146	1	0.50	1.9
288 BR	Head Comp Liner	59365	1.00	15.34	91.40	2.23	0.431	0.423	0.03	0.375	0.146	1	2.50	5.7
288 BR	Helm	59366	1.00	11.00	58.80	1.64	0.431	0.423	0.03	0.375	0.146	1	1.80	3.7
288 BR	Door, Side Entry	59367	1.00	4.70	8.40	0.28	0.431	0.423	0.03	0.375	0.146	1	0.80	0.5
290 CR Base Boat	Lid, Ladder	43505	1.00	2.50	17.00	0.40	0.431	0.423	0.03	0.375	0.146	1	0.40	1.1
290 CR Base Boat	Shower w/Bottom	43568	1.00	12.50	125.00	2.81	0.431	0.423	0.03	0.375	0.146	1	2.00	7.8
290 CR Base Boat	Helm	61317	1.00	18.70	68.25	2.13	0.431	0.423	0.03	0.375	0.146	1	3.00	4.3
290 CR Base Boat	Motor Hatch	61318	1.00	8.20	91.40	2.04	0.431	0.423	0.03	0.375	0.146	1	1.30	5.7
290 CR Base Boat	Lid, Ladder	61319	1.00	2.00	19.00	0.45	0.431	0.423	0.03	0.375	0.146	1	0.30	1.2
290 CR Base Boat	Shower Wall	61321	1.00	7.34	101.90	2.20	0.431	0.423	0.03	0.375	0.146	1	1.20	6.4
180 BR	No Glass Small Parts													
180 CC	No Glass Small Parts													

* - fraction of VOM (as styrene/MMA) that is emitted based on the amount available in the material as applied.

Boat Model	Part Description	Part No.	Appl. Time (Hrs)	Usage Amount (lbs)			VOM Content (Wt. Fraction)			VOM Emission Factor*			VOM Emissions (lbs/hr)	
				Gelcoat	Resin	Catalyst	Gelcoat	Resin	Catalyst	Gelcoat	Resin	Catalyst	Gelcoat	Resin & Catalyst
192 BR w/Liner	Swim Platform	43554	1.00	6.25	40.00	0.83	0.33	0.35	0.03	0.375	0.099	1	0.80	1.4
192 BR w/Liner	Motor Box	43558	1.00	8.00	63.00	1.41	0.33	0.35	0.03	0.375	0.099	1	1.00	2.2
192 BR w/Liner	Box Ft Star/Port	59024	1.00	0.10	17.00	0.60	0.33	0.35	0.03	0.375	0.099	1	0.00	0.6
192 BR w/Liner	Lid, Fuel Tank	61179	1.00	4.00	27.00	0.64	0.33	0.35	0.03	0.375	0.099	1	0.50	1
205 BR L Shape	Sundeck	59356	1.00	12.00	79.00	2.20	0.33	0.35	0.03	0.375	0.099	1	1.50	2.8
205 BR L Shape	Dash, Port Side	59357	1.00	8.75	50.00	1.13	0.33	0.35	0.03	0.375	0.099	1	1.10	1.8
205 BR L Shape	Lid, Ladder	59472	1.00	2.50	17.00	0.40	0.33	0.35	0.03	0.375	0.099	1	0.30	0.6
205 CC Super Sport	Lid, Ladder	43505	1.00	2.50	17.00	0.40	0.33	0.35	0.03	0.375	0.099	1	0.30	0.6
212 DB	Lid, Ladder	43505	1.00	2.50	17.00	0.40	0.33	0.35	0.03	0.375	0.099	1	0.30	0.6
212 DB	Lid, Ladder	43553	1.00	1.75	17.00	0.38	0.33	0.35	0.03	0.375	0.099	1	0.20	0.6
212 DB	Door, Head Hatch	59060	1.00	2.00	16.00	0.45	0.33	0.35	0.03	0.375	0.099	1	0.20	0.6
212 DB	Seat Base	61182	1.00	9.00	46.00	1.43	0.33	0.35	0.03	0.375	0.099	1	1.10	1.6
215 CC Super Sport	Motor Box	43559	1.00	8.00	63.00	1.53	0.33	0.35	0.03	0.375	0.099	1	1.00	2.2
215 CC Super Sport	Helm	59607	1.00	14.00	62.00	1.59	0.33	0.35	0.03	0.375	0.099	1	1.70	2.2
215 CC Super Sport	Door, Cabin	59621	1.00	7.50	38.00	0.88	0.33	0.35	0.03	0.375	0.099	1	0.90	1.3
230 BR L-Shaped 2 Buckets	Lid, Ladder	43560	1.00	1.75	17.00	0.38	0.33	0.35	0.03	0.375	0.099	1	0.20	0.6
230 BR L-Shaped 2 Buckets	Lid, Ladder	43570	1.00	2.00	17.00	0.45	0.33	0.35	0.03	0.375	0.099	1	0.20	0.6
230 BR L-Shaped 2 Buckets	Door, Head Hatch	59611	1.00	3.70	26.00	0.61	0.33	0.35	0.03	0.375	0.099	1	0.50	0.9
230 BR L-Shaped 2 Buckets	Head Comp Liner	59697	1.00	9.00	71.00	1.65	0.33	0.35	0.03	0.375	0.099	1	1.10	2.5
230 CC Super Sport	Lid, Fuel Tank	59358	1.00	3.00	31.00	0.70	0.33	0.35	0.03	0.375	0.099	1	0.40	1.1
230 CC Super Sport	Console	59359	1.00	7.67	55.00	1.30	0.33	0.35	0.03	0.375	0.099	1	0.90	1.9
230 CC Super Sport	Helm	59360	1.00	12.90	65.00	1.63	0.33	0.35	0.03	0.375	0.099	1	1.60	2.3
230 CC Super Sport	Lid, Ladder	59472	1.00	2.50	17.00	0.40	0.33	0.35	0.03	0.375	0.099	1	0.30	0.6
238 DB	Lid, Ladder	43560	1.00	1.75	17.00	0.38	0.33	0.35	0.03	0.375	0.099	1	0.20	0.6
238 DB	Door, Head Hatch	59060	1.00	2.00	16.00	0.45	0.33	0.35	0.03	0.375	0.099	1	0.20	0.6
238 DB	Seat Base	61182	1.00	9.00	46.00	1.43	0.33	0.35	0.03	0.375	0.099	1	1.10	1.6
239 DB Lshaped Two Buckets	Lid, Ladder	43560	1.00	1.75	17.00	0.38	0.33	0.35	0.03	0.375	0.099	1	0.20	0.6
239 DB Lshaped Two Buckets	Lid, Ladder	43570	1.00	2.00	17.00	0.45	0.33	0.35	0.03	0.375	0.099	1	0.20	0.6
239 DB Lshaped Two Buckets	Door, Head Hatch	59611	1.00	3.70	26.00	0.61	0.33	0.35	0.03	0.375	0.099	1	0.50	0.9
239 DB Lshaped Two Buckets	Seat Base	59612	1.00	6.80	76.00	1.69	0.33	0.35	0.03	0.375	0.099	1	0.80	2.7
239 DB Lshaped Two Buckets	Head Comp Liner	59697	1.00	9.00	71.00	1.65	0.33	0.35	0.03	0.375	0.099	1	1.10	2.5
242 CR 2002 Base Boat	Lid, Ladder	43570	1.00	2.00	17.00	0.45	0.33	0.35	0.03	0.375	0.099	1	0.20	0.6
242 CR 2002 Base Boat	Shower w/Sink	43571	1.00	9.00	64.00	1.51	0.33	0.35	0.03	0.375	0.099	1	1.10	2.3
242 CR 2002 Base Boat	Shower w/Bottom	43572	1.00	14.34	90.00	2.16	0.33	0.35	0.03	0.375	0.099	1	1.80	3.2

* - fraction of VOM (as styrene/MMA) that is emitted based on the amount available in the material as applied.

Boat Model	Part Description	Part No.	Appl. Time (Hrs)	Usage Amount (lbs)			VOM Content (Wt. Fraction)			VOM Emission Factor*			VOM Emissions (lbs/hr)	
				Gelcoat	Resin	Catalyst	Gelcoat	Resin	Catalyst	Gelcoat	Resin	Catalyst	Gelcoat	Resin & Catalyst
242 CR 2002 Base Boat	Mator Hatch	59613	1.00	6.00	78.00	1.75	0.33	0.35	0.03	0.375	0.099	1	0.70	2.8
242 CR 2002 Base Boat	Helm	59614	1.00	14.00	65.00	1.90	0.33	0.35	0.03	0.375	0.099	1	1.70	2.3
262 CR Base Boat	Motor Hatch	59613	1.00	6.00	78.00	1.75	0.33	0.35	0.03	0.375	0.099	1	0.70	2.8
262 CR Base Boat	Helm	59614	1.00	14.00	65.00	1.90	0.33	0.35	0.03	0.375	0.099	1	1.70	2.3
262 CR Base Boat	Shower w/Sink	59615	1.00	11.34	93.00	2.18	0.33	0.35	0.03	0.375	0.099	1	1.40	3.3
262 CR Base Boat	Shower w/Bottom	59616	1.00	17.70	120.00	2.84	0.33	0.35	0.03	0.375	0.099	1	2.20	4.2
262 CR Base Boat	Top, Shower Marble	59619	1.00	NA	3.00	0.26	0.33	0.35	0.03	0.375	0.099	1	NA	0.1
266 BR Super Sport	Lid, Anchor Storage	43524	1.00	2.50	16.00	0.26	0.33	0.35	0.03	0.375	0.099	1	0.30	0.6
266 BR Super Sport	Lid, Ladder	43552	1.00	2.50	19.00	0.46	0.33	0.35	0.03	0.375	0.099	1	0.30	0.7
266 CC with Liner	Lid, Anchor Storage	20543	1.00	2.34	20.00	0.46	0.33	0.35	0.03	0.375	0.099	1	0.30	0.7
266 CC with Liner	Lid, Fuel Tank	20570	1.00	4.00	32.50	0.75	0.33	0.35	0.03	0.375	0.099	1	0.50	1.1
266 CC with Liner	Lid, Ladder	43516	1.00	2.00	17.00	0.45	0.33	0.35	0.03	0.375	0.099	1	0.20	0.6
266 CC with Liner	Helm	43556	1.00	8.40	52.50	1.31	0.33	0.35	0.03	0.375	0.099	1	1.00	1.9
266 CC with Liner	Lid, Ski Locker	43563	1.00	2.40	14.70	0.36	0.33	0.35	0.03	0.375	0.099	1	0.30	0.5
266 CC with Liner	Seat Base	59474	1.00	12.40	75.80	1.82	0.33	0.35	0.03	0.375	0.099	1	1.50	2.7
266 CC with Liner	Wetbar	60610	1.00	2.00	12.60	0.30	0.33	0.35	0.03	0.375	0.099	1	0.20	0.4
266 CC with Liner	Wetbar	60629	1.00	1.84	10.75	0.27	0.33	0.35	0.03	0.375	0.099	1	0.20	0.4
288 BR	Lid, Ladder	43570	1.00	2.00	17.00	0.45	0.33	0.35	0.03	0.375	0.099	1	0.20	0.6
288 BR	Door, Head Hatch	59060	1.00	2.00	16.00	0.45	0.33	0.35	0.03	0.375	0.099	1	0.20	0.6
288 BR	Sundeck	59362	1.00	16.50	92.40	2.62	0.33	0.35	0.03	0.375	0.099	1	2.00	3.3
288 BR	Door, Head	59364	1.00	3.40	30.00	0.59	0.33	0.35	0.03	0.375	0.099	1	0.40	1.1
288 BR	Head Comp Liner	59365	1.00	15.34	91.40	2.23	0.33	0.35	0.03	0.375	0.099	1	1.90	3.2
288 BR	Helm	59366	1.00	11.00	58.80	1.64	0.33	0.35	0.03	0.375	0.099	1	1.40	2.1
288 BR	Door, Side Entry	59367	1.00	4.70	8.40	0.28	0.33	0.35	0.03	0.375	0.099	1	0.60	0.3
290 CR Base Boat	Lid, Ladder	43505	1.00	2.50	17.00	0.40	0.33	0.35	0.03	0.375	0.099	1	0.30	0.6
290 CR Base Boat	Shower w/Bottom	43568	1.00	12.50	125.00	2.81	0.33	0.35	0.03	0.375	0.099	1	1.50	4.4
290 CR Base Boat	Helm	61317	1.00	18.70	68.25	2.13	0.33	0.35	0.03	0.375	0.099	1	2.30	2.4
290 CR Base Boat	Motor Hatch	61318	1.00	8.20	91.40	2.04	0.33	0.35	0.03	0.375	0.099	1	1.00	3.2
290 CR Base Boat	Lid, Ladder	61319	1.00	2.00	19.00	0.45	0.33	0.35	0.03	0.375	0.099	1	0.20	0.7
290 CR Base Boat	Shower Wall	61321	1.00	7.34	101.90	2.20	0.33	0.35	0.03	0.375	0.099	1	0.90	3.6
180 BR	No Glass Small Parts													
180 CC	No Glass Small Parts													

* - fraction of VOM (as styrene/MMA) that is emitted based on the amount available in the material as applied.

Crownline Boats, Inc.

MACT Compliance Summary

Month*	Compliance Status
Sep-03	0.8% below
Oct-03	2.9% below
Nov-03	5.1% below
Dec-03	6.7% below
Jan-04	8.1% below
Feb-04	9.9% below
Mar-04	10.7% below

* MACT Compliance Status is computed for 12-month period ending on the date listed.

Crownline Boats, Inc.

September-2003
MACT Compliance

Item #	Operation & Application Method	Application	Required % HAP	Percent Filler	Mass Used Mi (lb/yr)	Mass Used Mi (Mg)	Actual % HAP	% HAP without filler	MACT Model Point Value PVi (kg HAP/Mg)	HAP Emissions Mi*PVi (kg HAP)	% of Total HAP Emissions	HAP Limit Factor (kg Hap/Mg)	HAP Limit (kg HAP)	HAP Emissions & HAP Limit Difference	HAP Emissions Percent of HAP Limit
	Production resin - flow coat														
40009	PUTTY, LAMENEX VBOND VERT STRK FILL (5 GA	Non-atomized	35	0	0	0.0	26.0	26.0	23.2	0	0.0	46	0	0	50
59622	SPRAYCORE 1800 - print barrier/barrier coat	Non-atomized	35	20	33893.3	15.4	40.0	50.0	82.1	1262	0.8	46	707	555	178
62529	RESIN, PRODUCTION (LOW STYRENE) AOI T36	Non-atomized	35	0	4371836.2	1983.0	33.5	33.5	41.3	81834	52.3	46	91219	-9385	90
62534	VINYLESTER, ARMORGUARD BARRIERCOAT	Non-atomized	35	5	36628.97	16.6	29.9	31.5	34.0	565	0.4	46	764	-199	74
90032	VINYLESTER, BLACK	Non-atomized	35	0	214.62	0.1	50.0	50.0	102.6	10	0.0	46	4	6	223
90067	RESIN, MARBLE	Non-atomized	35	0	5936.84	2.7	33.0	33.0	39.9	107	0.1	46	124	-16	87
90077	GRANICOAT, BURNT AMBER	Non-atomized	34	0	14.7	0.0	28.0	28.0	27.4	0	0.0	45	0	0	61
93049	RESIN, AME 4000	Non-atomized	35	0	12867.4	5.8	46.0	46.0	84.9	496	0.3	46	268	227	185
93050	RESIN, PRODUCTION, MR12504	Non-atomized	35	0	0	0.0	39.0	39.0	58.3	0	0.0	46	0	0	127
94015	SPRAYCORE 2000 - bulk print barrier/core matrix	Non-atomized	35	30	87312.12	39.6	40.0	57.1	97.3	3855	2.5	46	1822	2033	212
94057	SPRAYCORE 2000 - low VOC	Non-atomized	35	30	26254.881	11.9	25.0	35.7	33.4	398	0.3	46	548	-150	73
94058	SPRAYCORE 1800 - low VOC	Non-atomized	35	20	132856.02	60.3	30.0	37.5	42.7	2571	1.6	46	2772	-201	93
94084	BARRIER COAT, WHITE	Non-atomized	36	0	0	0.0	31.7	31.7	36.4	0	0.0	47	0	0	77
	SUBTOTAL				4707815	2135				91099	58.2		98230	-7130	
	Production resin - spray gun														
59622	SPRAYCORE 1800 - print barrier/barrier coat	atomized	28	20	25734.8	11.7	40.0	50.0	147.6	1723	1.1	46	537	1187	321
62534	VINYLESTER, ARMORGUARD BARRIERCOAT	atomized	28	5	10642.8	4.8	29.9	31.5	57.1	275	0.2	46	222	53	124
90032	VINYLESTER, BLACK	atomized	28	0	1637.58	0.7	50.0	50.0	184.6	137	0.1	46	34	103	401
94015	SPRAYCORE 2000 - bulk print barrier/core matrix	atomized	28	30	62113.38	28.2	40.0	57.1	178.6	5032	3.2	46	1296	3736	388
94057	SPRAYCORE 2000 - low VOC	atomized	28	30	0	0.0	25.0	35.7	57.1	0	0.0	46	0	0	124
94058	SPRAYCORE 1800 - low VOC	atomized	28	20	0	0.0	30.0	37.5	73.5	0	0.0	46	0	0	160
	SUBTOTAL				100129	45				7168	0.00		2089	5078	
	Pigmented gel coat														
62019	GELCOAT, CITRINE	atomized	33	0	29597.04	13.4	40.4	40.4	217.9	2925	1.9	159	2135	790	137
62535	GELCOAT, OPAL LOW VOC STYRENE	atomized	33	0	27794.25	12.6	28.4	28.4	120.8	1523	1.0	159	2005	-482	76
62604	GELCOAT, MOONSTONE LOW VOC STYRENE	atomized	33	0	324043.83	147.0	27.8	27.8	116.5	17124	10.9	159	23370	-6247	73
90038	GELCOAT, TANZANITE (PURPLE)	atomized	33	0	539.55	0.2	40.9	40.9	222.8	55	0.0	159	39	16	140
90039	GELCOAT, EMERALD	atomized	33	0	8736.75	4.0	42.1	42.1	233.9	927	0.6	159	630	297	147
90041	GELCOAT, AMETHYST	atomized	33	0	23743.17	10.8	40.0	40.0	214.7	2312	1.5	159	1712	600	135
90044	GELCOAT, MOONSTONE	atomized	33	0	179617.68	81.5	37.3	37.3	191.0	15559	9.9	159	12954	2605	120
90046	GELCOAT, NEW RUBY	atomized	33	0	25279.65	11.5	40.1	40.1	215.6	2472	1.6	159	1823	649	136
90048	GELCOAT, OPAL	atomized	33	0	47911.05	21.7	38.6	38.6	202.3	4395	2.8	159	3455	940	127
90053	GELCOAT, ONYX	atomized	33	0	23689.71	10.7	42.2	42.2	234.8	2523	1.6	159	1709	815	148
90055	GELCOAT, SAPPHIRE (OBS)	atomized	33	0	43.56	0.0	42.9	42.9	241.4	5	0.0	159	3	2	152
90056	GELCOAT, SPINEL WINE	atomized	33	0	9518.85	4.3	41.2	41.2	225.6	974	0.6	159	687	287	142
90057	GELCOAT, AMBER	atomized	33	0	870.21	0.4	43.1	43.1	243.3	96	0.1	159	63	33	153
90058	GELCOAT, MOONROCK	atomized	33	0	16237.98	7.4	41.8	41.8	231.1	1702	1.1	159	1171	531	145
91035	ENAMEL, WAXCOTE MOONSTONE	atomized	33	0	9999	4.5	27.7	27.7	116.0	526	0.3	159	721	-195	73
91036	ENAMEL, WAXCOTE OPAL	atomized	33	0	2834.37	1.3	28.5	28.5	121.7	156	0.1	159	204	-48	77
	SUBTOTAL				730457	331.3				53274	34.1		52681	593	
	Tooling resin - flow coat														
40005	PRIMER, DURATECH SURFACING	Non-atomized	39	0	861.208	0.4	32.7	32.7	39.1	15	0.0	54	21	-6	72
40051	DYNALITE BODY FILLER 5 GAL/BKT	Non-atomized	39	49	0	0.0	18.0	35.3	23.7	0	0.0	54	0	0	44
40067	PUTTY, LAMINEX FILLEr 5 GAL CAN	Non-atomized	39	60	6459.03	2.9	30.0	75.0	103.3	303	0.2	54	158	144	191
59274	EVERGLASS	Non-atomized	39	5	230.08	0.1	15.0	15.8	7.1	1	0.0	54	6	-5	13
59283	ALPHA FILL	Non-atomized	39	60	38216.25	17.3	20.0	50.0	41.1	712	0.5	54	936	-224	76
59495	BLISTER REPAIR	Non-atomized	39	65	998.062	0.5	25.0	71.4	80.9	37	0.0	54	24	12	150
59698	RESIN, AME 5000-C	Non-atomized	39	0	0	0.0	32.0	32.0	37.2	0	0.0	54	0	0	69
62020	PRIMER, DURA TECH CLEAR	Non-atomized	39	0	42.5595	0.0	47.6	47.6	91.8	2	0.0	54	1	1	170
90072	XYCON RESIN	Non-atomized	38	0	3752	1.7	33.3	33.3	40.7	69	0.0	54	92	-23	75
94071	PIN HOLE REPAIR (ICING)	Non-atomized	39	40	0	0.0	30.0	50.0	61.6	0	0.0	55	0	0	112
	SUBTOTAL				50559	23				1138	0.7		1238	-101	

Crownline Boats, Inc.

October-2003
MACT Compliance

Item #	Operation & Application Method	Application	Required % HAP	Percent Filler	Mass Used Mi (lb/yr)	Mass Used Mi (Mg)	Actual % HAP	% HAP without filler	MACT Model Point Value PVi (kg HAP/Mg)	HAP Emissions Mi*PVi (kg HAP)	% of Total HAP Emissions	HAP Limit Factor (kg Hap/Mg)	HAP Limit (kg HAP)	HAP Emissions & HAP Limit Difference	HAP Emissions Percent of HAP Limit
	Production resin - flow coat														
40009	PUTTY, LAMENEX VBOND VERT STRK FILL (5 GA	Non-atomized	35	0	0	0.0	26.0	26.0	23.2	0	0.0	46	0	0	50
59622	SPRAYCORE 1800 - print barrier/barrier coat	Non-atomized	35	20	33893.3	15.4	40.0	50.0	82.1	1262	0.8	46	707	555	178
62529	RESIN, PRODUCTION (LOW STYRENE) AOI T36	Non-atomized	35	0	4349486.4	1972.9	33.5	33.5	41.3	81416	53.0	46	90753	-9337	90
62534	VINYLESTER, ARMORGUARD BARRIERCOAT	Non-atomized	35	5	41067.39	18.6	29.9	31.5	34.0	634	0.4	46	857	-223	74
90032	VINYLESTER, BLACK	Non-atomized	35	0	214.62	0.1	50.0	50.0	102.6	10	0.0	46	4	6	223
90067	RESIN, MARBLE	Non-atomized	35	0	5446.84	2.5	33.0	33.0	39.9	99	0.1	46	114	-15	87
90077	GRANICOAT, BURNT AMBER	Non-atomized	34	0	14.7	0.0	28.0	28.0	27.4	0	0.0	45	0	0	61
93049	RESIN, AME 4000	Non-atomized	35	0	13798.4	6.3	46.0	46.0	84.9	531	0.3	46	288	243	185
93050	RESIN, PRODUCTION, MR12504	Non-atomized	35	0	0	0.0	39.0	39.0	58.3	0	0.0	46	0	0	127
94015	SPRAYCORE 2000 - bulk print barrier/core matrix	Non-atomized	35	30	87312.12	39.6	40.0	57.1	97.3	3855	2.5	46	1822	2033	212
94057	SPRAYCORE 2000 - low VOC	Non-atomized	35	30	28189.401	12.8	25.0	35.7	33.4	427	0.3	46	588	-161	73
94058	SPRAYCORE 1800 - low VOC	Non-atomized	35	20	145473.52	66.0	30.0	37.5	42.7	2816	1.8	46	3035	-220	93
94084	BARRIER COAT, WHITE	Non-atomized	36	0	0	0.0	31.7	31.7	36.4	0	0.0	47	0	0	77
	SUBTOTAL				4704897	2134				91050	59.3		98169	-7119	
	Production resin - spray gun														
59622	SPRAYCORE 1800 - print barrier/barrier coat	atomized	28	20	13852.3	6.3	40.0	50.0	147.6	928	0.6	46	289	639	321
62534	VINYLESTER, ARMORGUARD BARRIERCOAT	atomized	28	5	7173.6	3.3	29.9	31.5	57.1	186	0.1	46	150	36	124
90032	VINYLESTER, BLACK	atomized	28	0	256.76	0.1	50.0	50.0	184.6	21	0.0	46	5	16	401
94015	SPRAYCORE 2000 - bulk print barrier/core matrix	atomized	28	30	39119.64	17.7	40.0	57.1	178.6	3169	2.1	46	816	2353	388
94057	SPRAYCORE 2000 - low VOC	atomized	28	30	0	0.0	25.0	35.7	57.1	0	0.0	46	0	0	124
94058	SPRAYCORE 1800 - low VOC	atomized	28	20	0	0.0	30.0	37.5	73.5	0	0.0	46	0	0	160
	SUBTOTAL				60402	27				4304	0.00		1260	3044	
	Pigmented gel coat														
62019	GELCOAT, CITRINE	atomized	33	0	29052.54	13.2	40.4	40.4	217.9	2871	1.9	159	2095	776	137
62535	GELCOAT, OPAL LOW VOC STYRENE	atomized	33	0	32704.65	14.8	28.4	28.4	120.8	1792	1.2	159	2359	-567	76
62604	GELCOAT, MOONSTONE LOW VOC STYRENE	atomized	33	0	365059.59	165.6	27.8	27.8	116.5	19291	12.6	159	26329	-7038	73
90038	GELCOAT, TANZANITE (PURPLE)	atomized	33	0	536.58	0.2	40.9	40.9	222.8	54	0.0	159	39	16	140
90039	GELCOAT, EMERALD	atomized	33	0	8573.4	3.9	42.1	42.1	233.9	910	0.6	159	618	291	147
90041	GELCOAT, AMETHYST	atomized	33	0	24785.64	11.2	40.0	40.0	214.7	2414	1.6	159	1788	626	135
90044	GELCOAT, MOONSTONE	atomized	33	0	154241.01	70.0	37.3	37.3	191.0	13361	8.7	159	11124	2237	120
90046	GELCOAT, NEW RUBY	atomized	33	0	26478.54	12.0	40.1	40.1	215.6	2589	1.7	159	1910	680	136
90048	GELCOAT, OPAL	atomized	33	0	38473.38	17.5	38.6	38.6	202.3	3530	2.3	159	2775	755	127
90053	GELCOAT, ONYX	atomized	33	0	24915.33	11.3	42.2	42.2	234.8	2654	1.7	159	1797	857	148
90055	GELCOAT, SAPPHIRE (OBS)	atomized	33	0	43.56	0.0	42.9	42.9	241.4	5	0.0	159	3	2	152
90056	GELCOAT, SPINEL WINE	atomized	33	0	9507.96	4.3	41.2	41.2	225.6	973	0.6	159	686	287	142
90057	GELCOAT, AMBER	atomized	33	0	866.25	0.4	43.1	43.1	243.3	96	0.1	159	62	33	153
90058	GELCOAT, MOONROCK	atomized	33	0	17255.7	7.8	41.8	41.8	231.1	1809	1.2	159	1245	564	145
91035	ENAMEL, WAXCOTE MOONSTONE	atomized	33	0	10825.65	4.9	27.7	27.7	116.0	570	0.4	159	781	-211	73
91036	ENAMEL, WAXCOTE OPAL	atomized	33	0	2888.82	1.3	28.5	28.5	121.7	159	0.1	159	208	-49	77
	SUBTOTAL				746209	338.5				53076	34.5		53817	-741	
	Tooling resin - flow coat														
40005	PRIMER, DURATECH SURFACING	Non-atomized	39	0	915.0335	0.4	32.7	32.7	39.1	16	0.0	54	22	-6	72
40051	DYNALITE BODY FILLER 5 GAL/BKT	Non-atomized	39	49	0	0.0	18.0	35.3	23.7	0	0.0	54	0	0	44
40067	PUTTY, LAMINEX FILLEr 5 GAL CAN	Non-atomized	39	60	6709.38	3.0	30.0	75.0	103.3	314	0.2	54	164	150	191
59274	EVERGLASS	Non-atomized	39	5	230.08	0.1	15.0	15.8	7.1	1	0.0	54	6	-5	13
59283	ALPHA FILL	Non-atomized	39	60	42140	19.1	20.0	50.0	41.1	785	0.5	54	1032	-247	76
59495	BLISTER REPAIR	Non-atomized	39	65	943.8195	0.4	25.0	71.4	80.9	35	0.0	54	23	12	150
59698	RESIN, AME 5000-C	Non-atomized	39	0	0	0.0	32.0	32.0	37.2	0	0.0	54	0	0	69
62020	PRIMER, DURA TECH CLEAR	Non-atomized	39	0	42.5595	0.0	47.6	47.6	91.8	2	0.0	54	1	1	170
90072	XYCON RESIN	Non-atomized	38	0	3752	1.7	33.3	33.3	40.7	69	0.0	54	92	-23	75
94071	PIN HOLE REPAIR (ICING)	Non-atomized	39	40	0	0.0	30.0	50.0	61.6	0	0.0	55	0	0	112
	SUBTOTAL				54733	25				1222	0.8		1341	-119	

	Tooling resin - spray gun														
40005	PRIMER, DURATECH SURFACING	atomized	30	0	107.651	0.0	32.7	32.7	65.9	3	0.0	54	3	1	122
62020	PRIMER, DURA TECH CLEAR	atomized	30	0	0	0.0	47.6	47.6	163.8	0	0.0	54	0	0	303
90072	XYCON RESIN	atomized	30	0	0	0.0	33.3	33.3	68.9	0	0.0	54	0	0	128
	SUBTOTAL				108	0.0				3	0.0		3	1	
	Tooling gel coat														
37032	CALULK, COLORSIL CS117 BARK	atomized	40	0	0	0.0	0.0	0.0	0.0	0	0.0	213	0	0	0
40003	GELCOAT, TOOLING GREEN	atomized	40	0	0	0.0	47.2	47.2	283.7	0	0.0	214	0	0	133
40010	GELCOAT, TOOLING NEUTRAL	atomized	40	0	6367.25	2.9	48.2	48.2	293.4	847	0.6	214	618	229	137
40042	NEW PATCH BOOSTER - B Gel coat patch	atomized	40	0	1680	0.8	77.1	77.1	644.9	491	0.3	214	163	328	301
62108	HK PATCH AID	atomized	40	0	0	0.0	78.0	78.0	657.1	0	0.0	214	0	0	307
90079	PATCH AID, LOW VOC	atomized	40	0	4025.0691	1.8	53.0	53.0	344.0	628	0.4	214	391	237	161
94085	GELCOAT, TOOLING ORANGE	atomized	40	0	456	0.2	46.6	46.6	276.9	57	0.0	215	44	13	129
	SUBTOTAL				8047	5.7				2024.1	1.3		1216.3	807.7	
	Production resin - flow coat - used as Tooling Resin														
40009	PUTTY, LAMENEX VBOND VERT STRK FILL (5 GA	Non-atomized	39	0	0	0.0	26.0	26.0	23.2	0	0.0	54	0	0	43
59622	SPRAYCORE 1800 - print barrier/barrier coat	Non-atomized	39	20	691.7	0.3	40.0	50.0	82.1	26	0.0	54	17	9	152
62529	RESIN, PRODUCTION (LOW STYRENE) AOI T36	Non-atomized	39	0	88765.029	40.3	33.5	33.5	41.3	1662	1.1	54	2174	-513	76
62534	VINYLESTER, ARMORGUARD BARRIERCOAT	Non-atomized	39	5	838.11	0.4	29.9	31.5	34.0	13	0.0	54	21	-8	63
90032	VINYLESTER, BLACK	Non-atomized	39	0	4.38	0.0	50.0	50.0	102.6	0	0.0	54	0	0	190
90067	RESIN, MARBLE	Non-atomized	39	0	111.16	0.1	33.0	33.0	39.9	2	0.0	54	3	-1	74
90077	GRANICOAT, BURNT AMBER	Non-atomized	38	0	0.3	0.0	28.0	28.0	27.4	0	0.0	53	0	0	52
93049	RESIN, AME 4000	Non-atomized	39	0	281.6	0.1	46.0	46.0	84.9	11	0.0	54	7	4	157
93050	RESIN, PRODUCTION, MR12504	Non-atomized	39	0	0	0.0	39.0	39.0	58.3	0	0.0	54	0	0	108
94015	SPRAYCORE 2000 - bulk print barrier/core matrix	Non-atomized	39	30	1781.88	0.8082	40.0	57.1	97.3	79	0.1	54	43.645	35	180
94057	SPRAYCORE 2000 - low VOC	Non-atomized	39	30	575.2939	0.3	25.0	35.7	33.4	9	0.0	54	14	-5	62
94058	SPRAYCORE 1800 - low VOC	Non-atomized	39	20	2968.8473	1.3	30.0	37.5	42.7	57	0.0	54	73	-15	79
94084	BARRIER COAT, WHITE	Non-atomized	40	0	0	0.0	31.7	31.7	36.4	0	0.0	55	0	0	66
	SUBTOTAL				96018	44				1858	1.2		2352	-494	
	Production resin - spray gun - used as Tooling Resin														
59622	SPRAYCORE 1800 - print barrier/barrier coat	atomized	30	20	282.7	0.1	40.0	50.0	147.6	19	0.0	54	7	12	273
62534	VINYLESTER, ARMORGUARD BARRIERCOAT	atomized	30	5	146.4	0.1	29.9	31.5	57.1	4	0.0	54	4	0	106
90032	VINYLESTER, BLACK	atomized	30	0	5.24	0.0	50.0	50.0	184.6	0	0.0	54	0	0	342
94015	SPRAYCORE 2000 - bulk print barrier/core matrix	atomized	30	30	798.36	0.4	40.0	57.1	178.6	65	0.0	54	20	45	331
94057	SPRAYCORE 2000 - low VOC	atomized	30	30	0	0.0	25.0	35.7	57.1	0	0.0	54	0	0	106
94058	SPRAYCORE 1800 - low VOC	atomized	30	20	0	0.0	30.0	37.5	73.5	0	0.0	54	0	0	136
	SUBTOTAL				1233	1				88	0.00		30	58	
	TOTALS				5671646	2575				153625	97		158188.237	-4563	
										% below limit					
										2.9					

Crownline Boats, Inc.

November-2003
MACT Compliance

Item #	Operation & Application Method	Application	Required % HAP	Percent Filler	Mass Used Mi (lb/yr)	Mass Used Mi (Mg)	Actual % HAP	% HAP without filler	MACT Model Point Value PVi (kg HAP/Mg)	HAP Emissions Mi*PVi (kg HAP)	% of Total HAP Emissions	HAP Limit Factor (kg Hap/Mg)	HAP Limit (kg HAP)	HAP Emissions & HAP Limit Difference	HAP Emissions Percent of HAP Limit
	Production resin - flow coat														
40009	PUTTY, LAMENEX VBOND VERT STRK FILL (5 GA	Non-atomized	35	0	0	0.0	26.0	26.0	23.2	0	0.0	46	0	0	50
59622	SPRAYCORE 1800 - print barrier/barrier coat	Non-atomized	35	20	33893.3	15.4	40.0	50.0	82.1	1262	0.8	46	707	555	178
62529	RESIN, PRODUCTION (LOW STYRENE) AOI T36	Non-atomized	35	0	4397337.6	1994.6	33.5	33.5	41.3	82312	54.3	46	91752	-9440	90
62534	VINYLESTER, ARMORGUARD BARRIERCOAT	Non-atomized	35	5	41067.39	18.6	29.9	31.5	34.0	634	0.4	46	857	-223	74
90032	VINYLESTER, BLACK	Non-atomized	35	0	214.62	0.1	50.0	50.0	102.6	10	0.0	46	4	6	223
90067	RESIN, MARBLE	Non-atomized	35	0	6038.76	2.7	33.0	33.0	39.9	109	0.1	46	126	-17	87
90077	GRANICOAT, BURNT AMBER	Non-atomized	34	0	537.04	0.2	28.0	28.0	27.4	7	0.0	45	11	-4	61
93049	RESIN, AME 4000	Non-atomized	35	0	12401.9	5.6	46.0	46.0	84.9	478	0.3	46	259	219	185
93050	RESIN, PRODUCTION, MR12504	Non-atomized	35	0	0	0.0	39.0	39.0	58.3	0	0.0	46	0	0	127
94015	SPRAYCORE 2000 - bulk print barrier/core matrix	Non-atomized	35	30	87312.12	39.6	40.0	57.1	97.3	3855	2.5	46	1822	2033	212
94057	SPRAYCORE 2000 - low VOC	Non-atomized	35	30	28189.401	12.8	25.0	35.7	33.4	427	0.3	46	588	-161	73
94058	SPRAYCORE 1800 - low VOC	Non-atomized	35	20	159676.66	72.4	30.0	37.5	42.7	3091	2.0	46	3332	-241	93
94084	BARRIER COAT, WHITE	Non-atomized	36	0	6272	2.8	31.7	31.7	36.4	104	0.1	47	134	-30	77
	SUBTOTAL				4772941	2165				92288	60.9		99591	-7304	
	Production resin - spray gun														
59622	SPRAYCORE 1800 - print barrier/barrier coat	atomized	28	20	6032.88	2.7	40.0	50.0	147.6	404	0.3	46	126	278	321
62534	VINYLESTER, ARMORGUARD BARRIERCOAT	atomized	28	5	3096.8	1.4	29.9	31.5	57.1	80	0.1	46	65	16	124
90032	VINYLESTER, BLACK	atomized	28	0	256.76	0.1	50.0	50.0	184.6	21	0.0	46	5	16	401
94015	SPRAYCORE 2000 - bulk print barrier/core matrix	atomized	28	30	17155.88	7.8	40.0	57.1	178.6	1390	0.9	46	358	1032	388
94057	SPRAYCORE 2000 - low VOC	atomized	28	30	0	0.0	25.0	35.7	57.1	0	0.0	46	0	0	124
94058	SPRAYCORE 1800 - low VOC	atomized	28	20	0	0.0	30.0	37.5	73.5	0	0.0	46	0	0	160
	SUBTOTAL				26542	12				1895	0.00		554	1342	
	Pigmented gel coat														
62019	GELCOAT, CITRINE	atomized	33	0	28607.04	13.0	40.4	40.4	217.9	2827	1.9	159	2063	764	137
62535	GELCOAT, OPAL LOW VOC STYRENE	atomized	33	0	38071.44	17.3	28.4	28.4	120.8	2086	1.4	159	2746	-660	76
62604	GELCOAT, MOONSTONE LOW VOC STYRENE	atomized	33	0	407996.88	185.1	27.8	27.8	116.5	21560	14.2	159	29425	-7865	73
90038	GELCOAT, TANZANITE (PURPLE)	atomized	33	0	536.58	0.2	40.9	40.9	222.8	54	0.0	159	39	16	140
90039	GELCOAT, EMERALD	atomized	33	0	8290.26	3.8	42.1	42.1	233.9	880	0.6	159	598	282	147
90041	GELCOAT, AMETHYST	atomized	33	0	24779.7	11.2	40.0	40.0	214.7	2413	1.6	159	1787	626	135
90044	GELCOAT, MOONSTONE	atomized	33	0	121089.87	54.9	37.3	37.3	191.0	10489	6.9	159	8733	1756	120
90046	GELCOAT, NEW RUBY	atomized	33	0	27815.04	12.6	40.1	40.1	215.6	2720	1.8	159	2006	714	136
90048	GELCOAT, OPAL	atomized	33	0	32804.64	14.9	38.6	38.6	202.3	3010	2.0	159	2366	644	127
90053	GELCOAT, ONYX	atomized	33	0	24804.45	11.3	42.2	42.2	234.8	2642	1.7	159	1789	853	148
90055	GELCOAT, SAPPHIRE (OBS)	atomized	33	0	3.96	0.0	42.9	42.9	241.4	0	0.0	159	0	0	152
90056	GELCOAT, SPINEL WINE	atomized	33	0	10013.85	4.5	41.2	41.2	225.6	1025	0.7	159	722	302	142
90057	GELCOAT, AMBER	atomized	33	0	866.25	0.4	43.1	43.1	243.3	96	0.1	159	62	33	153
90058	GELCOAT, MOONROCK	atomized	33	0	16754.76	7.6	41.8	41.8	231.1	1756	1.2	159	1208	548	145
91035	ENAMEL, WAXCOTE MOONSTONE	atomized	33	0	11756.25	5.3	27.7	27.7	116.0	619	0.4	159	848	-229	73
91036	ENAMEL, WAXCOTE OPAL	atomized	33	0	2814.57	1.3	28.5	28.5	121.7	155	0.1	159	203	-48	77
	SUBTOTAL				757006	343.4				52332	34.5		54596	-2264	
	Tooling resin - flow coat														
40005	PRIMER, DURATECH SURFACING	Non-atomized	39	0	915.0335	0.4	32.7	32.7	39.1	16	0.0	54	22	-6	72
40051	DYNALITE BODY FILLER 5 GAL/BKT	Non-atomized	39	49	0	0.0	18.0	35.3	23.7	0	0.0	54	0	0	44
40067	PUTTY, LAMINEX FILLEr 5 GAL CAN	Non-atomized	39	60	6709.38	3.0	30.0	75.0	103.3	314	0.2	54	164	150	191
59274	EVERGLASS	Non-atomized	39	5	230.08	0.1	15.0	15.8	7.1	1	0.0	54	6	-5	13
59283	ALPHA FILL	Non-atomized	39	60	41978.75	19.0	20.0	50.0	41.1	782	0.5	54	1028	-247	76
59495	BLISTER REPAIR	Non-atomized	39	65	954.668	0.4	25.0	71.4	80.9	35	0.0	54	23	12	150
59698	RESIN, AME 5000-C	Non-atomized	39	0	0	0.0	32.0	32.0	37.2	0	0.0	54	0	0	69
62020	PRIMER, DURA TECH CLEAR	Non-atomized	39	0	51.0714	0.0	47.6	47.6	91.8	2	0.0	54	1	1	170
90072	XYCON RESIN	Non-atomized	38	0	3752	1.7	33.3	33.3	40.7	69	0.0	54	92	-23	75
94071	PIN HOLE REPAIR (ICING)	Non-atomized	39	40	0	0.0	30.0	50.0	61.6	0	0.0	55	0	0	112
	SUBTOTAL				54591	25				1219	0.8		1337	-118	

	Tooling resin - spray gun														
40005	PRIMER, DURATECH SURFACING	atomized	30	0	53.8255	0.0	32.7	32.7	65.9	2	0.0	54	1	0	122
62020	PRIMER, DURA TECH CLEAR	atomized	30	0	0	0.0	47.6	47.6	163.8	0	0.0	54	0	0	303
90072	XYCON RESIN	atomized	30	0	0	0.0	33.3	33.3	68.9	0	0.0	54	0	0	128
	SUBTOTAL				54	0.0				2	0.0		1	0	
	Tooling gel coat														
37032	CALULK, COLORSIL CS117 BARK	atomized	40	0	0	0.0	0.0	0.0	0.0	0	0.0	213	0	0	0
40003	GELCOAT, TOOLING GREEN	atomized	40	0	0	0.0	47.2	47.2	283.7	0	0.0	214	0	0	133
40010	GELCOAT, TOOLING NEUTRAL	atomized	40	0	5865.25	2.7	48.2	48.2	293.4	781	0.5	214	569	211	137
40042	NEW PATCH BOOSTER - B Gel coat patch	atomized	40	0	1344	0.6	77.1	77.1	644.9	393	0.3	214	130	263	301
62108	HK PATCH AID	atomized	40	0	0	0.0	78.0	78.0	657.1	0	0.0	214	0	0	307
90079	PATCH AID, LOW VOC	atomized	40	0	3949.1244	1.8	53.0	53.0	344.0	616	0.4	214	383	233	161
94085	GELCOAT, TOOLING ORANGE	atomized	40	0	1366	0.6	46.6	46.6	276.9	172	0.1	215	133	38	129
	SUBTOTAL				7209	5.7				1961.4	1.3		1216.3	745.1	
	Production resin - flow coat - used as Tooling Resin														
40009	PUTTY, LAMENEX VBOND VERT STRK FILL (5 GA	Non-atomized	39	0	0	0.0	26.0	26.0	23.2	0	0.0	54	0	0	43
59622	SPRAYCORE 1800 - print barrier/barrier coat	Non-atomized	39	20	691.7	0.3	40.0	50.0	82.1	26	0.0	54	17	9	152
62529	RESIN, PRODUCTION (LOW STYRENE) AOI T36	Non-atomized	39	0	89741.584	40.7	33.5	33.5	41.3	1680	1.1	54	2198	-518	76
62534	VINYLESTER, ARMORGUARD BARRIERCOAT	Non-atomized	39	5	838.11	0.4	29.9	31.5	34.0	13	0.0	54	21	-8	63
90032	VINYLESTER, BLACK	Non-atomized	39	0	4.38	0.0	50.0	50.0	102.6	0	0.0	54	0	0	190
90067	RESIN, MARBLE	Non-atomized	39	0	123.24	0.1	33.0	33.0	39.9	2	0.0	54	3	-1	74
90077	GRANICOAT, BURNT AMBER	Non-atomized	38	0	10.96	0.0	28.0	28.0	27.4	0	0.0	53	0	0	52
93049	RESIN, AME 4000	Non-atomized	39	0	253.1	0.1	46.0	46.0	84.9	10	0.0	54	6	4	157
93050	RESIN, PRODUCTION, MR12504	Non-atomized	39	0	0	0.0	39.0	39.0	58.3	0	0.0	54	0	0	108
94015	SPRAYCORE 2000 - bulk print barrier/core matrix	Non-atomized	39	30	1781.88	0.8082	40.0	57.1	97.3	79	0.1	54	43.645	35	180
94057	SPRAYCORE 2000 - low VOC	Non-atomized	39	30	575.2939	0.3	25.0	35.7	33.4	9	0.0	54	14	-5	62
94058	SPRAYCORE 1800 - low VOC	Non-atomized	39	20	3258.7073	1.5	30.0	37.5	42.7	63	0.0	54	80	-17	79
94084	BARRIER COAT, WHITE	Non-atomized	40	0	128	0.1	31.7	31.7	36.4	2	0.0	55	3	-1	66
	SUBTOTAL				97407	44				1883	1.2		2386	-503	
	Production resin - spray gun - used as Tooling Resin														
59622	SPRAYCORE 1800 - print barrier/barrier coat	atomized	30	20	123.12	0.1	40.0	50.0	147.6	8	0.0	54	3	5	273
62534	VINYLESTER, ARMORGUARD BARRIERCOAT	atomized	30	5	63.2	0.0	29.9	31.5	57.1	2	0.0	54	2	0	106
90032	VINYLESTER, BLACK	atomized	30	0	5.24	0.0	50.0	50.0	184.6	0	0.0	54	0	0	342
94015	SPRAYCORE 2000 - bulk print barrier/core matrix	atomized	30	30	350.12	0.2	40.0	57.1	178.6	28	0.0	54	9	20	331
94057	SPRAYCORE 2000 - low VOC	atomized	30	30	0	0.0	25.0	35.7	57.1	0	0.0	54	0	0	106
94058	SPRAYCORE 1800 - low VOC	atomized	30	20	0	0.0	30.0	37.5	73.5	0	0.0	54	0	0	136
	SUBTOTAL				542	0				39	0.00		13	25	
	TOTALS				5716291	2595				151619	99		159695.170	-8076	
									% below limit	5.1					

Crownline Boats, Inc.

December-2003
MACT Compliance

Item #	Operation & Application Method	Application	Required % HAP	Percent Filler	Mass Used Mi (lb/yr)	Mass Used Mi (Mg)	Actual % HAP	% HAP without filler	MACT Model Point Value PVi (kg HAP/Mg)	HAP Emissions Mi*PVi (kg HAP)	% of Total HAP Emissions	HAP Limit Factor (kg Hap/Mg)	HAP Limit (kg HAP)	HAP Emissions & HAP Limit Difference	HAP Emissions Percent of HAP Limit
	Production resin - flow coat														
40009	PUTTY, LAMENEX VBOND VERT STRK FILL (5 GA	Non-atomized	35	0	0	0.0	26.0	26.0	23.2	0	0.0	46	0	0	50
59622	SPRAYCORE 1800 - print barrier/barrier coat	Non-atomized	35	20	33893.3	15.4	40.0	50.0	82.1	1262	0.9	46	707	555	178
62529	RESIN, PRODUCTION (LOW STYRENE) AOI T36	Non-atomized	35	0	4313517.9	1956.6	33.5	33.5	41.3	80743	55.5	46	90003	-9260	90
62534	VINYLESTER, ARMORGUARD BARRIERCOAT	Non-atomized	35	5	41067.39	18.6	29.9	31.5	34.0	634	0.4	46	857	-223	74
90032	VINYLESTER, BLACK	Non-atomized	35	0	214.62	0.1	50.0	50.0	102.6	10	0.0	46	4	6	223
90067	RESIN, MARBLE	Non-atomized	35	0	5744.76	2.6	33.0	33.0	39.9	104	0.1	46	120	-16	87
90077	GRANICOAT, BURNT AMBER	Non-atomized	34	0	537.04	0.2	28.0	28.0	27.4	7	0.0	45	11	-4	61
93049	RESIN, AME 4000	Non-atomized	35	0	12103	5.5	46.0	46.0	84.9	466	0.3	46	253	214	185
93050	RESIN, PRODUCTION, MR12504	Non-atomized	35	0	0	0.0	39.0	39.0	58.3	0	0.0	46	0	0	127
94015	SPRAYCORE 2000 - bulk print barrier/core matrix	Non-atomized	35	30	87312.12	39.6	40.0	57.1	97.3	3855	2.6	46	1822	2033	212
94057	SPRAYCORE 2000 - low VOC	Non-atomized	35	30	28352.081	12.9	25.0	35.7	33.4	430	0.3	46	592	-162	73
94058	SPRAYCORE 1800 - low VOC	Non-atomized	35	20	167126.58	75.8	30.0	37.5	42.7	3235	2.2	46	3487	-252	93
94084	BARRIER COAT, WHITE	Non-atomized	36	0	8173.2	3.7	31.7	31.7	36.4	135	0.1	47	174	-39	77
	SUBTOTAL				4698042	2131				90880	62.5		98029	-7149	
	Production resin - spray gun														
59622	SPRAYCORE 1800 - print barrier/barrier coat	atomized	28	20	0	0.0	40.0	50.0	147.6	0	0.0	46	0	0	321
62534	VINYLESTER, ARMORGUARD BARRIERCOAT	atomized	28	5	0	0.0	29.9	31.5	57.1	0	0.0	46	0	0	124
90032	VINYLESTER, BLACK	atomized	28	0	0	0.0	50.0	50.0	184.6	0	0.0	46	0	0	401
94015	SPRAYCORE 2000 - bulk print barrier/core matrix	atomized	28	30	0	0.0	40.0	57.1	178.6	0	0.0	46	0	0	388
94057	SPRAYCORE 2000 - low VOC	atomized	28	30	0	0.0	25.0	35.7	57.1	0	0.0	46	0	0	124
94058	SPRAYCORE 1800 - low VOC	atomized	28	20	0	0.0	30.0	37.5	73.5	0	0.0	46	0	0	160
	SUBTOTAL				0	0				0	0.00		0	0	
	Pigmented gel coat														
62019	GELCOAT, CITRINE	atomized	33	0	28608.03	13.0	40.4	40.4	217.9	2827	1.9	159	2063	764	137
62535	GELCOAT, OPAL LOW VOC STYRENE	atomized	33	0	39197.07	17.8	28.4	28.4	120.8	2148	1.5	159	2827	-679	76
62604	GELCOAT, MOONSTONE LOW VOC STYRENE	atomized	33	0	425448.6	193.0	27.8	27.8	116.5	22482	15.5	159	30684	-8202	73
90038	GELCOAT, TANZANITE (PURPLE)	atomized	33	0	14.85	0.0	40.9	40.9	222.8	2	0.0	159	1	0	140
90039	GELCOAT, EMERALD	atomized	33	0	7558.65	3.4	42.1	42.1	233.9	802	0.6	159	545	257	147
90041	GELCOAT, AMETHYST	atomized	33	0	23245.2	10.5	40.0	40.0	214.7	2264	1.6	159	1676	587	135
90044	GELCOAT, MOONSTONE	atomized	33	0	92856.06	42.1	37.3	37.3	191.0	8044	5.5	159	6697	1347	120
90046	GELCOAT, NEW RUBY	atomized	33	0	25955.82	11.8	40.1	40.1	215.6	2538	1.7	159	1872	666	136
90048	GELCOAT, OPAL	atomized	33	0	28596.15	13.0	38.6	38.6	202.3	2623	1.8	159	2062	561	127
90053	GELCOAT, ONYX	atomized	33	0	23107.59	10.5	42.2	42.2	234.8	2461	1.7	159	1667	795	148
90055	GELCOAT, SAPPHIRE (OBS)	atomized	33	0	3.96	0.0	42.9	42.9	241.4	0	0.0	159	0	0	152
90056	GELCOAT, SPINEL WINE	atomized	33	0	8477.37	3.8	41.2	41.2	225.6	867	0.6	159	611	256	142
90057	GELCOAT, AMBER	atomized	33	0	142.56	0.1	43.1	43.1	243.3	16	0.0	159	10	5	153
90058	GELCOAT, MOONROCK	atomized	33	0	15420.24	7.0	41.8	41.8	231.1	1617	1.1	159	1112	504	145
91035	ENAMEL, WAXCOTE MOONSTONE	atomized	33	0	11439.45	5.2	27.7	27.7	116.0	602	0.4	159	825	-223	73
91036	ENAMEL, WAXCOTE OPAL	atomized	33	0	2715.57	1.2	28.5	28.5	121.7	150	0.1	159	196	-46	77
	SUBTOTAL				732787	332.4				49442	34.0		52849	-3407	
	Tooling resin - flow coat														
40005	PRIMER, DURATECH SURFACING	Non-atomized	39	0	915.0335	0.4	32.7	32.7	39.1	16	0.0	54	22	-6	72
40051	DYNALITE BODY FILLER 5 GAL/BKT	Non-atomized	39	49	0	0.0	18.0	35.3	23.7	0	0.0	54	0	0	44
40067	PUTTY, LAMINEX FILLEr 5 GAL CAN	Non-atomized	39	60	7059.87	3.2	30.0	75.0	103.3	331	0.2	54	173	158	191
59274	EVERGLASS	Non-atomized	39	5	230.08	0.1	15.0	15.8	7.1	1	0.0	54	6	-5	13
59283	ALPHA FILL	Non-atomized	39	60	43806.25	19.9	20.0	50.0	41.1	816	0.6	54	1073	-257	76
59495	BLISTER REPAIR	Non-atomized	39	65	878.7285	0.4	25.0	71.4	80.9	32	0.0	54	22	11	150
59698	RESIN, AME 5000-C	Non-atomized	39	0	0	0.0	32.0	32.0	37.2	0	0.0	54	0	0	69
62020	PRIMER, DURA TECH CLEAR	Non-atomized	39	0	59.5833	0.0	47.6	47.6	91.8	2	0.0	54	1	1	170
90072	XYCON RESIN	Non-atomized	38	0	3752	1.7	33.3	33.3	40.7	69	0.0	54	92	-23	75
94071	PIN HOLE REPAIR (ICING)	Non-atomized	39	40	0	0.0	30.0	50.0	61.6	0	0.0	55	0	0	112
	SUBTOTAL				56702	26				1267	0.9		1389	-121	

	Tooling resin - spray gun														
40005	PRIMER, DURATECH SURFACING	atomized	30	0	0	0.0	32.7	32.7	65.9	0	0.0	54	0	0	122
62020	PRIMER, DURA TECH CLEAR	atomized	30	0	0	0.0	47.6	47.6	163.8	0	0.0	54	0	0	303
90072	XYCON RESIN	atomized	30	0	0	0.0	33.3	33.3	68.9	0	0.0	54	0	0	128
	SUBTOTAL				0	0.0				0	0.0		0	0	
	Tooling gel coat														
37032	CALULK, COLORSIL CS117 BARK	atomized	40	0	11.5875	0.0	0.0	0.0	0.0	0	0.0	213	1	-1	0
40003	GELCOAT, TOOLING GREEN	atomized	40	0	0	0.0	47.2	47.2	283.7	0	0.0	214	0	0	133
40010	GELCOAT, TOOLING NEUTRAL	atomized	40	0	5827.25	2.6	48.2	48.2	293.4	776	0.5	214	566	210	137
40042	NEW PATCH BOOSTER - B Gel coat patch	atomized	40	0	1448	0.7	77.1	77.1	644.9	424	0.3	214	141	283	301
62108	HK PATCH AID	atomized	40	0	0	0.0	78.0	78.0	657.1	0	0.0	214	0	0	307
90079	PATCH AID, LOW VOC	atomized	40	0	4320.4096	2.0	53.0	53.0	344.0	674	0.5	214	419	255	161
94085	GELCOAT, TOOLING ORANGE	atomized	40	0	1526	0.7	46.6	46.6	276.9	192	0.1	215	149	43	129
	SUBTOTAL				7275	6.0				2064.8	1.4		1275.5	789.3	
	Production resin - flow coat - used as Tooling Resin														
40009	PUTTY, LAMENEX VBOND VERT STRK FILL (5 GA	Non-atomized	39	0	0	0.0	26.0	26.0	23.2	0	0.0	54	0	0	43
59622	SPRAYCORE 1800 - print barrier/barrier coat	Non-atomized	39	20	691.7	0.3	40.0	50.0	82.1	26	0.0	54	17	9	152
62529	RESIN, PRODUCTION (LOW STYRENE) AOI T36	Non-atomized	39	0	88030.977	39.9	33.5	33.5	41.3	1648	1.1	54	2156	-508	76
62534	VINYLESTER, ARMORGUARD BARRIERCOAT	Non-atomized	39	5	838.11	0.4	29.9	31.5	34.0	13	0.0	54	21	-8	63
90032	VINYLESTER, BLACK	Non-atomized	39	0	4.38	0.0	50.0	50.0	102.6	0	0.0	54	0	0	190
90067	RESIN, MARBLE	Non-atomized	39	0	117.24	0.1	33.0	33.0	39.9	2	0.0	54	3	-1	74
90077	GRANICOAT, BURNT AMBER	Non-atomized	38	0	10.96	0.0	28.0	28.0	27.4	0	0.0	53	0	0	52
93049	RESIN, AME 4000	Non-atomized	39	0	247	0.1	46.0	46.0	84.9	10	0.0	54	6	3	157
93050	RESIN, PRODUCTION, MR12504	Non-atomized	39	0	0	0.0	39.0	39.0	58.3	0	0.0	54	0	0	108
94015	SPRAYCORE 2000 - bulk print barrier/core matrix	Non-atomized	39	30	1781.88	0.8082	40.0	57.1	97.3	79	0.1	54	43.645	35	180
94057	SPRAYCORE 2000 - low VOC	Non-atomized	39	30	578.6139	0.3	25.0	35.7	33.4	9	0.0	54	14	-5	62
94058	SPRAYCORE 1800 - low VOC	Non-atomized	39	20	3410.7465	1.5	30.0	37.5	42.7	66	0.0	54	84	-18	79
94084	BARRIER COAT, WHITE	Non-atomized	40	0	166.8	0.1	31.7	31.7	36.4	3	0.0	55	4	-1	66
	SUBTOTAL				95878	43				1855	1.3		2349	-494	
	Production resin - spray gun - used as Tooling Resin														
59622	SPRAYCORE 1800 - print barrier/barrier coat	atomized	30	20	0	0.0	40.0	50.0	147.6	0	0.0	54	0	0	273
62534	VINYLESTER, ARMORGUARD BARRIERCOAT	atomized	30	5	0	0.0	29.9	31.5	57.1	0	0.0	54	0	0	106
90032	VINYLESTER, BLACK	atomized	30	0	0	0.0	50.0	50.0	184.6	0	0.0	54	0	0	342
94015	SPRAYCORE 2000 - bulk print barrier/core matrix	atomized	30	30	0	0.0	40.0	57.1	178.6	0	0.0	54	0	0	331
94057	SPRAYCORE 2000 - low VOC	atomized	30	30	0	0.0	25.0	35.7	57.1	0	0.0	54	0	0	106
94058	SPRAYCORE 1800 - low VOC	atomized	30	20	0	0.0	30.0	37.5	73.5	0	0.0	54	0	0	136
	SUBTOTAL				0	0				0	0.00		0	0	
	TOTALS				5590684	2539				145509	100		155891.637	-10383	
										% below limit 6.7					

Crownline Boats, Inc.

January-2004
MACT Compliance

Item #	Operation & Application Method	Application	Required % HAP	Percent Filler	Mass Used Mi (lb/yr)	Mass Used Mi (Mg)	Actual % HAP	% HAP without filler	MACT Model Point Value PVi (kg HAP/Mg)	HAP Emissions Mi*PVi (kg HAP)	% of Total HAP Emissions	HAP Limit Factor (kg Hap/Mg)	HAP Limit (kg HAP)	HAP Emissions & HAP Limit Difference	HAP Emissions Percent of HAP Limit
	Production resin - flow coat														
40009	PUTTY, LAMENEX VBOND VERT STRK FILL (5 GA	Non-atomized	35	0	0	0.0	26.0	26.0	23.2	0	0.0	46	0	0	50
59622	SPRAYCORE 1800 - print barrier/barrier coat	Non-atomized	35	20	24548.02	11.1	40.0	50.0	82.1	914	0.6	46	512	402	178
62529	RESIN, PRODUCTION (LOW STYRENE) AOI T36	Non-atomized	35	0	4367748.4	1981.2	33.5	33.5	41.3	81758	56.0	46	91134	-9377	90
62534	VINYLESTER, ARMORGUARD BARRIERCOAT	Non-atomized	35	5	37328.69	16.9	29.9	31.5	34.0	576	0.4	46	779	-203	74
90032	VINYLESTER, BLACK	Non-atomized	35	0	45.08	0.0	50.0	50.0	102.6	2	0.0	46	1	1	223
90067	RESIN, MARBLE	Non-atomized	35	0	6969.76	3.2	33.0	33.0	39.9	126	0.1	46	145	-19	87
90077	GRANICOAT, BURNT AMBER	Non-atomized	34	0	1505.28	0.7	28.0	28.0	27.4	19	0.0	45	31	-12	61
93049	RESIN, AME 4000	Non-atomized	35	0	10706.5	4.9	46.0	46.0	84.9	412	0.3	46	223	189	185
93050	RESIN, PRODUCTION, MR12504	Non-atomized	35	0	0	0.0	39.0	39.0	58.3	0	0.0	46	0	0	127
94015	SPRAYCORE 2000 - bulk print barrier/core matrix	Non-atomized	35	30	60915.82	27.6	40.0	57.1	97.3	2690	1.8	46	1271	1419	212
94057	SPRAYCORE 2000 - low VOC	Non-atomized	35	30	28352.081	12.9	25.0	35.7	33.4	430	0.3	46	592	-162	73
94058	SPRAYCORE 1800 - low VOC	Non-atomized	35	20	180137.06	81.7	30.0	37.5	42.7	3487	2.4	46	3759	-272	93
94084	BARRIER COAT, WHITE	Non-atomized	36	0	20462.4	9.3	31.7	31.7	36.4	338	0.2	47	436	-99	77
	SUBTOTAL				4738719	2149				90751	62.1		98883	-8132	
	Production resin - spray gun														
59622	SPRAYCORE 1800 - print barrier/barrier coat	atomized	28	20	0	0.0	40.0	50.0	147.6	0	0.0	46	0	0	321
62534	VINYLESTER, ARMORGUARD BARRIERCOAT	atomized	28	5	0	0.0	29.9	31.5	57.1	0	0.0	46	0	0	124
90032	VINYLESTER, BLACK	atomized	28	0	0	0.0	50.0	50.0	184.6	0	0.0	46	0	0	401
94015	SPRAYCORE 2000 - bulk print barrier/core matrix	atomized	28	30	0	0.0	40.0	57.1	178.6	0	0.0	46	0	0	388
94057	SPRAYCORE 2000 - low VOC	atomized	28	30	0	0.0	25.0	35.7	57.1	0	0.0	46	0	0	124
94058	SPRAYCORE 1800 - low VOC	atomized	28	20	0	0.0	30.0	37.5	73.5	0	0.0	46	0	0	160
	SUBTOTAL				0	0				0	0.00		0	0	
	Pigmented gel coat														
62019	GELCOAT, CITRINE	atomized	33	0	26058.78	11.8	40.4	40.4	217.9	2575	1.8	159	1879	696	137
62535	GELCOAT, OPAL LOW VOC STYRENE	atomized	33	0	44204.49	20.1	28.4	28.4	120.8	2422	1.7	159	3188	-766	76
62604	GELCOAT, MOONSTONE LOW VOC STYRENE	atomized	33	0	476102.94	216.0	27.8	27.8	116.5	25159	17.2	159	34337	-9178	73
90038	GELCOAT, TANZANITE (PURPLE)	atomized	33	0	14.85	0.0	40.9	40.9	222.8	2	0.0	159	1	0	140
90039	GELCOAT, EMERALD	atomized	33	0	7765.56	3.5	42.1	42.1	233.9	824	0.6	159	560	264	147
90041	GELCOAT, AMETHYST	atomized	33	0	24205.5	11.0	40.0	40.0	214.7	2357	1.6	159	1746	611	135
90044	GELCOAT, MOONSTONE	atomized	33	0	61046.37	27.7	37.3	37.3	191.0	5288	3.6	159	4403	885	120
90046	GELCOAT, NEW RUBY	atomized	33	0	26733.96	12.1	40.1	40.1	215.6	2614	1.8	159	1928	686	136
90048	GELCOAT, OPAL	atomized	33	0	23560.02	10.7	38.6	38.6	202.3	2161	1.5	159	1699	462	127
90053	GELCOAT, ONYX	atomized	33	0	24723.27	11.2	42.2	42.2	234.8	2633	1.8	159	1783	850	148
90055	GELCOAT, SAPPHIRE (OBS)	atomized	33	0	3.96	0.0	42.9	42.9	241.4	0	0.0	159	0	0	152
90056	GELCOAT, SPINEL WINE	atomized	33	0	8429.85	3.8	41.2	41.2	225.6	863	0.6	159	608	255	142
90057	GELCOAT, AMBER	atomized	33	0	139.59	0.1	43.1	43.1	243.3	15	0.0	159	10	5	153
90058	GELCOAT, MOONROCK	atomized	33	0	17092.35	7.8	41.8	41.8	231.1	1792	1.2	159	1233	559	145
91035	ENAMEL, WAXCOTE MOONSTONE	atomized	33	0	14470.83	6.6	27.7	27.7	116.0	762	0.5	159	1044	-282	73
91036	ENAMEL, WAXCOTE OPAL	atomized	33	0	2443.32	1.1	28.5	28.5	121.7	135	0.1	159	176	-41	77
	SUBTOTAL				756996	343.4				49602	34.0		54595	-4993	
	Tooling resin - flow coat														
40005	PRIMER, DURATECH SURFACING	Non-atomized	39	0	947.3288	0.4	32.7	32.7	39.1	17	0.0	54	23	-6	72
40051	DYNALITE BODY FILLER 5 GAL/BKT	Non-atomized	39	49	0	0.0	18.0	35.3	23.7	0	0.0	54	0	0	44
40067	PUTTY, LAMINEX FILLEr 5 GAL CAN	Non-atomized	39	60	7660.71	3.5	30.0	75.0	103.3	359	0.2	54	188	171	191
59274	EVERGLASS	Non-atomized	39	5	230.08	0.1	15.0	15.8	7.1	1	0.0	54	6	-5	13
59283	ALPHA FILL	Non-atomized	39	60	47998.75	21.8	20.0	50.0	41.1	894	0.6	54	1176	-282	76
59495	BLISTER REPAIR	Non-atomized	39	65	911.274	0.4	25.0	71.4	80.9	33	0.0	54	22	11	150
59698	RESIN, AME 5000-C	Non-atomized	39	0	0	0.0	32.0	32.0	37.2	0	0.0	54	0	0	69
62020	PRIMER, DURA TECH CLEAR	Non-atomized	39	0	59.5833	0.0	47.6	47.6	91.8	2	0.0	54	1	1	170
90072	XYCON RESIN	Non-atomized	38	0	3752	1.7	33.3	33.3	40.7	69	0.0	54	92	-23	75
94071	PIN HOLE REPAIR (ICING)	Non-atomized	39	40	0	0.0	30.0	50.0	61.6	0	0.0	55	0	0	112
	SUBTOTAL				61560	28				1375	0.9		1508	-133	

	Tooling resin - spray gun														
40005	PRIMER, DURATECH SURFACING	atomized	30	0	0	0.0	32.7	32.7	65.9	0	0.0	54	0	0	122
62020	PRIMER, DURA TECH CLEAR	atomized	30	0	0	0.0	47.6	47.6	163.8	0	0.0	54	0	0	303
90072	XYCON RESIN	atomized	30	0	0	0.0	33.3	33.3	68.9	0	0.0	54	0	0	128
	SUBTOTAL				0	0.0				0	0.0		0	0	
	Tooling gel coat														
37032	CALULK, COLORSIL CS117 BARK	atomized	40	0	11.5875	0.0	0.0	0.0	0.0	0	0.0	213	1	-1	0
40003	GELCOAT, TOOLING GREEN	atomized	40	0	0	0.0	47.2	47.2	283.7	0	0.0	214	0	0	133
40010	GELCOAT, TOOLING NEUTRAL	atomized	40	0	5827.25	2.6	48.2	48.2	293.4	776	0.5	214	566	210	137
40042	NEW PATCH BOOSTER - B Gel coat patch	atomized	40	0	1393	0.6	77.1	77.1	644.9	407	0.3	214	135	272	301
62108	HK PATCH AID	atomized	40	0	0	0.0	78.0	78.0	657.1	0	0.0	214	0	0	307
90079	PATCH AID, LOW VOC	atomized	40	0	5763.3589	2.6	53.0	53.0	344.0	899	0.6	214	559	340	161
94085	GELCOAT, TOOLING ORANGE	atomized	40	0	3216	1.5	46.6	46.6	276.9	404	0.3	215	314	90	129
	SUBTOTAL				7220	7.4				2486.1	1.7		1575.1	911.0	
	Production resin - flow coat - used as Tooling Resin														
40009	PUTTY, LAMENEX VBOND VERT STRK FILL (5 GA	Non-atomized	39	0	0	0.0	26.0	26.0	23.2	0	0.0	54	0	0	43
59622	SPRAYCORE 1800 - print barrier/barrier coat	Non-atomized	39	20	500.98	0.2	40.0	50.0	82.1	19	0.0	54	12	6	152
62529	RESIN, PRODUCTION (LOW STYRENE) AOI T36	Non-atomized	39	0	89137.722	40.4	33.5	33.5	41.3	1669	1.1	54	2183	-515	76
62534	VINYLESTER, ARMORGUARD BARRIERCOAT	Non-atomized	39	5	761.81	0.3	29.9	31.5	34.0	12	0.0	54	19	-7	63
90032	VINYLESTER, BLACK	Non-atomized	39	0	0.92	0.0	50.0	50.0	102.6	0	0.0	54	0	0	190
90067	RESIN, MARBLE	Non-atomized	39	0	142.24	0.1	33.0	33.0	39.9	3	0.0	54	3	-1	74
90077	GRANICOAT, BURNT AMBER	Non-atomized	38	0	30.72	0.0	28.0	28.0	27.4	0	0.0	53	1	0	52
93049	RESIN, AME 4000	Non-atomized	39	0	218.5	0.1	46.0	46.0	84.9	8	0.0	54	5	3	157
93050	RESIN, PRODUCTION, MR12504	Non-atomized	39	0	0	0.0	39.0	39.0	58.3	0	0.0	54	0	0	108
94015	SPRAYCORE 2000 - bulk print barrier/core matrix	Non-atomized	39	30	1243.18	0.5639	40.0	57.1	97.3	55	0.0	54	30.450	24	180
94057	SPRAYCORE 2000 - low VOC	Non-atomized	39	30	578.6139	0.3	25.0	35.7	33.4	9	0.0	54	14	-5	62
94058	SPRAYCORE 1800 - low VOC	Non-atomized	39	20	3676.2665	1.7	30.0	37.5	42.7	71	0.0	54	90	-19	79
94084	BARRIER COAT, WHITE	Non-atomized	40	0	417.6	0.2	31.7	31.7	36.4	7	0.0	55	10	-4	66
	SUBTOTAL				96709	44				1852	1.3		2369	-517	
	Production resin - spray gun - used as Tooling Resin														
59622	SPRAYCORE 1800 - print barrier/barrier coat	atomized	30	20	0	0.0	40.0	50.0	147.6	0	0.0	54	0	0	273
62534	VINYLESTER, ARMORGUARD BARRIERCOAT	atomized	30	5	0	0.0	29.9	31.5	57.1	0	0.0	54	0	0	106
90032	VINYLESTER, BLACK	atomized	30	0	0	0.0	50.0	50.0	184.6	0	0.0	54	0	0	342
94015	SPRAYCORE 2000 - bulk print barrier/core matrix	atomized	30	30	0	0.0	40.0	57.1	178.6	0	0.0	54	0	0	331
94057	SPRAYCORE 2000 - low VOC	atomized	30	30	0	0.0	25.0	35.7	57.1	0	0.0	54	0	0	106
94058	SPRAYCORE 1800 - low VOC	atomized	30	20	0	0.0	30.0	37.5	73.5	0	0.0	54	0	0	136
	SUBTOTAL				0	0				0	0.00		0	0	
	TOTALS				5661203	2572				146067	100		158930.428	-12864	
										% below limit 8.1					

Crownline Boats, Inc.

March-2004
MACT Compliance

Item #	Operation & Application Method	Application	Required % HAP	Percent Filler	Mass Used Mi (lb/yr)	Mass Used Mi (Mg)	Actual % HAP	% HAP without filler	MACT Model Point Value PVi (kg HAP/Mg)	HAP Emissions Mi*PVi (kg HAP)	% of Total HAP Emissions	HAP Limit Factor (kg Hap/Mg)	HAP Limit (kg HAP)	HAP Emissions & HAP Limit Difference	HAP Emissions Percent of HAP Limit
	Production resin - flow coat														
40009	PUTTY, LAMENEX VBOND VERT STRK FILL (5 GA	Non-atomized	35	0	0	0.0	26.0	26.0	23.2	0	0.0	46	0	0	50
59622	SPRAYCORE 1800 - print barrier/barrier coat	Non-atomized	35	20	4663.82	2.1	40.0	50.0	82.1	174	0.1	46	97	76	178
62529	RESIN, PRODUCTION (LOW STYRENE) AOI T36	Non-atomized	35	0	4458389.1	2022.3	33.5	33.5	41.3	83454	57.8	46	93025	-9571	90
62534	VINYLESTER, ARMORGUARD BARRIERCOAT	Non-atomized	35	5	30248.19	13.7	29.9	31.5	34.0	467	0.3	46	631	-164	74
90032	VINYLESTER, BLACK	Non-atomized	35	0	0	0.0	50.0	50.0	102.6	0	0.0	46	0	0	223
90067	RESIN, MARBLE	Non-atomized	35	0	7459.76	3.4	33.0	33.0	39.9	135	0.1	46	156	-21	87
90077	GRANICOAT, BURNT AMBER	Non-atomized	34	0	2832.2	1.3	28.0	28.0	27.4	35	0.0	45	58	-23	61
93049	RESIN, AME 4000	Non-atomized	35	0	9143.4	4.1	46.0	46.0	84.9	352	0.2	46	191	161	185
93050	RESIN, PRODUCTION, MR12504	Non-atomized	35	0	0	0.0	39.0	39.0	58.3	0	0.0	46	0	0	127
94015	SPRAYCORE 2000 - bulk print barrier/core matrix	Non-atomized	35	30	5445.86	2.5	40.0	57.1	97.3	240	0.2	46	114	127	212
94057	SPRAYCORE 2000 - low VOC	Non-atomized	35	30	28047.301	12.7	25.0	35.7	33.4	425	0.3	46	585	-160	73
94058	SPRAYCORE 1800 - low VOC	Non-atomized	35	20	226968.34	103.0	30.0	37.5	42.7	4393	3.0	46	4736	-343	93
94084	BARRIER COAT, WHITE	Non-atomized	36	0	49685.02	22.5	31.7	31.7	36.4	820	0.6	47	1059	-239	77
	SUBTOTAL				4822883	2188				90496	62.7		100652	-10156	
	Production resin - spray gun														
59622	SPRAYCORE 1800 - print barrier/barrier coat	atomized	28	20	0	0.0	40.0	50.0	147.6	0	0.0	46	0	0	321
62534	VINYLESTER, ARMORGUARD BARRIERCOAT	atomized	28	5	0	0.0	29.9	31.5	57.1	0	0.0	46	0	0	124
90032	VINYLESTER, BLACK	atomized	28	0	0	0.0	50.0	50.0	184.6	0	0.0	46	0	0	401
94015	SPRAYCORE 2000 - bulk print barrier/core matrix	atomized	28	30	0	0.0	40.0	57.1	178.6	0	0.0	46	0	0	388
94057	SPRAYCORE 2000 - low VOC	atomized	28	30	0	0.0	25.0	35.7	57.1	0	0.0	46	0	0	124
94058	SPRAYCORE 1800 - low VOC	atomized	28	20	0	0.0	30.0	37.5	73.5	0	0.0	46	0	0	160
	SUBTOTAL				0	0				0	0.00		0	0	
	Pigmented gel coat														
62019	GELCOAT, CITRINE	atomized	33	0	25395.48	11.5	40.4	40.4	217.9	2510	1.7	159	1832	678	137
62535	GELCOAT, OPAL LOW VOC STYRENE	atomized	33	0	49290.12	22.4	28.4	28.4	120.8	2701	1.9	159	3555	-854	76
62604	GELCOAT, MOONSTONE LOW VOC STYRENE	atomized	33	0	544904.97	247.2	27.8	27.8	116.5	28795	19.9	159	39299	-10505	73
90038	GELCOAT, TANZANITE (PURPLE)	atomized	33	0	14.85	0.0	40.9	40.9	222.8	2	0.0	159	1	0	140
90039	GELCOAT, EMERALD	atomized	33	0	6937.92	3.1	42.1	42.1	233.9	736	0.5	159	500	236	147
90041	GELCOAT, AMETHYST	atomized	33	0	22390.83	10.2	40.0	40.0	214.7	2180	1.5	159	1615	566	135
90044	GELCOAT, MOONSTONE	atomized	33	0	16818.12	7.6	37.3	37.3	191.0	1457	1.0	159	1213	244	120
90046	GELCOAT, NEW RUBY	atomized	33	0	25874.64	11.7	40.1	40.1	215.6	2530	1.8	159	1866	664	136
90048	GELCOAT, OPAL	atomized	33	0	9406.98	4.3	38.6	38.6	202.3	863	0.6	159	678	185	127
90053	GELCOAT, ONYX	atomized	33	0	24035.22	10.9	42.2	42.2	234.8	2560	1.8	159	1733	827	148
90055	GELCOAT, SAPPHIRE (OBS)	atomized	33	0	2.97	0.0	42.9	42.9	241.4	0	0.0	159	0	0	152
90056	GELCOAT, SPINEL WINE	atomized	33	0	7169.58	3.3	41.2	41.2	225.6	734	0.5	159	517	217	142
90057	GELCOAT, AMBER	atomized	33	0	52.47	0.0	43.1	43.1	243.3	6	0.0	159	4	2	153
90058	GELCOAT, MOONROCK	atomized	33	0	17931.87	8.1	41.8	41.8	231.1	1880	1.3	159	1293	587	145
91035	ENAMEL, WAXCOTE MOONSTONE	atomized	33	0	16633.98	7.5	27.7	27.7	116.0	875	0.6	159	1200	-324	73
91036	ENAMEL, WAXCOTE OPAL	atomized	33	0	1611.72	0.7	28.5	28.5	121.7	89	0.1	159	116	-27	77
	SUBTOTAL				768472	348.6				47917	33.2		55423	-7506	
	Tooling resin - flow coat														
40005	PRIMER, DURATECH SURFACING	Non-atomized	39	0	1119.5704	0.5	32.7	32.7	39.1	20	0.0	54	27	-8	72
40051	DYNALITE BODY FILLER 5 GAL/BKT	Non-atomized	39	49	0	0.0	18.0	35.3	23.7	0	0.0	54	0	0	44
40067	PUTTY, LAMINEX FILLEr 5 GAL CAN	Non-atomized	39	60	9212.88	4.2	30.0	75.0	103.3	432	0.3	54	226	206	191
59274	EVERGLASS	Non-atomized	39	5	230.08	0.1	15.0	15.8	7.1	1	0.0	54	6	-5	13
59283	ALPHA FILL	Non-atomized	39	60	45203.75	20.5	20.0	50.0	41.1	842	0.6	54	1107	-265	76
59495	BLISTER REPAIR	Non-atomized	39	65	835.3345	0.4	25.0	71.4	80.9	31	0.0	54	20	10	150
59698	RESIN, AME 5000-C	Non-atomized	39	0	0	0.0	32.0	32.0	37.2	0	0.0	54	0	0	69
62020	PRIMER, DURA TECH CLEAR	Non-atomized	39	0	127.6785	0.1	47.6	47.6	91.8	5	0.0	54	3	2	170
90072	XYCON RESIN	Non-atomized	38	0	1872	0.8	33.3	33.3	40.7	35	0.0	54	46	-11	75
94071	PIN HOLE REPAIR (ICING)	Non-atomized	39	40	0	0.0	30.0	50.0	61.6	0	0.0	55	0	0	112
	SUBTOTAL				58601	27				1364	0.9		1435	-71	

4/23/04

Crownline Boats Inc.
Comparison of VOM Emissions vs. Ozone Impact[1]

Column1	Column 2	Column 3	Column 4	Column 5	Column 6
VOM Emissions (Tons/yr)[2]	**Table 1 Emission Factor** (PPMC/ppm)	**4th Highest 1-Hr Ozone Conc.**[3] (ppm)	**Contribution From Crownline** (ppm)	**1-Hr Ozone Std** (ppm)	**Total Impact**[4] (ppm)
160[5]	0.533	0.098	0.00533	0.12	0.1033
250	0.833	0.098	0.00833	0.12	0.1063
300	1.0	0.098	0.01	0.12	0.108
600	1.68	0.098	0.0168	0.12	0.1148
917	2.2	0.098	0.022	0.12	0.12

(1) As computed per VOC/NOx Screening Table 1 from the USEPA Guidance Document, "Screening Method for Ozone Increment Determination" by Richard D. Scheffe, Sept. 1988;

(2) Maximum annual non-methane organic compound (NMOC) emissions (same as VOM) as determined from the above-referenced "Screening Method" (maximum *daily* VOM emissions multiplied by 365 days/yr);

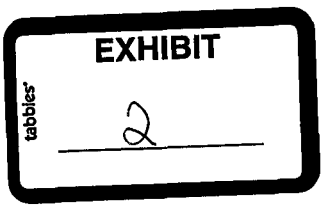
(3) Value taken from Table B2 of the Illinois Annual Air Quality Report for Year 2002 for the Hamilton County Dale Monitor;

(4) The total impact on ozone air quality concentration is equal to the sum of the value shown in column 4 (contribution from Crownline's operations) and the value shown in column 3 (the 4th highest ozone reading as measured by the Dale monitor during 2002);

(5) This would have been the approximate annual amount of VOMs emitted by Crownline if all resin and gelcoat operations were in compliance with the 8lb/hour rule (equal to or less than 8 lb/hour per "emission source" as defined by the Illinois EPA).

NOTE #1: As the above table shows, Crownline would have to increase it's VOM emissions by more than **triple** to result in a contribution significant enough to cause the ozone level at the Dale ozone monitor in Hamilton County, IL to equal or exceed the 0.12 ppm 1-hour ozone standard.

NOTE #2: USEPA's guidance for ozone increment determination is based upon the *daily* amount of VOM emitted by the facility, NOT the hourly emission level. USEPA uses daily versus hourly emissions to estimate the incremental impact on ozone levels in the atmosphere because there is no direct correlation between hourly VOM emissions and hourly ozone concentrations. Therefore, although the National Ambient Air Quality Standard (NAAQS) for ozone is based on an hourly averaging period, it has been well established by the scientific community that ozone formation occurs over several *hours* (and sometimes *days*) before all of the VOM reacts with available amounts of NOx emissions present in the atmosphere to form ozone. VOM and NOx emissions are *precursors* to the formation of ozone that require the presence of sunlight to complete the reaction. Consequently, setting an hourly limit on VOM (such as Illinois EPA's 8 lb/hr rule does) does little to limit ozone formation. It is inappropriate to consider that a mass of VOM's that is emitted within a one hour automatically translates to the formation of ozone during the same 1-hour period. However, *daily* mass amounts of VOMs can be more readily shown to correlate to impacts on the federal ozone air quality standard of 0.12 ppm.



Presentation of Crownline Boats, Inc. Before the Illinois Pollution Control Board Hearing on Adjusted Standard Petition

April 23, 2004

(AS-2004-001)

CROWNLINE

Crownline's Production Process

- Mold Fabrication
- Gelcoat Application
- Lamination
- Grind & Trim
- Woodworking/Upholstery/Final Assembly
- Shipping

Gelcoat Application

- Gelcoat - applied to hull and deck molds
- Provides color and smooth surface to outside of boats
- Single application using air atomized spray guns
- Worker protection/pollution control equipment:
  - 180,000 cfm ventilation system
  - Dedicated spray booths
  - Use of a lower styrene-content gelcoat (33.4%)
  - Panel filters control particulate emissions

Lamination

- Glass fibers, polyester resin and catalyst applied to the mold
- Non-atomized flow-coat chopper guns
- Fiberglass/resin rolled flat using hand rollers to remove air bubbles
- Laminate is applied in a series of layers called “skins”
- Worker protection/pollution control equipment:
  - 160,000 cfm ventilation system
  - panel filters to control particulate
  - submerged-fill resin tanks to reduce emissions

Compliance With New MACT Standard

- August 23, 2004 - boat manufacturers must meet new MACT
- "MACT floor" - achieved by the best-performing 12% of boat manufacturers
- Most boat manufacturers will use flow-coat guns and low-HAP resins and gelcoats
- EPA - MACT floor would not be air pollution control equipment
- Crownline is currently in compliance (over a year early)

Investigation of Compliance Alternatives

- Reducing VOM content in production materials
- Alternative production methods
- Installing end-of-the-pipe emission controls

Reducing VOM Content in Production Materials

- Now using lower VOM gelcoats and resins in compliance with MACT
- Further reduction not technically feasible while still maintaining product integrity

Alternative Production Methods

- Crownline investigated various production alternatives to reduce VOM emissions
  - Open mold methods
  - Closed molding methods
- None of the alternatives - technologically or economically viable for Crownline
- Require complete re-tooling and re-design
- Would not result in compliance with 8 lb/hr Rule on a strict hourly basis
- No alternative technologies available for gelcoat, lacquering, caulking, and adhesive operations

Feasibility of Tail-End Controls at Crownline

- Obtained cost quotes from control system suppliers
- U.S. EPA's method for estimating control technology costs/ton
- Conclusion - End of pipe emission controls are cost prohibitive and not feasible
- Costs driven by OSHA requirements - large volume ventilation system needed
  - Up-front capital costs - $7 million to $14 million
  - Annualized operational costs - $4.5 million to $6 million
  - Cost per ton of VOM removed - from $35,000 to $58,000/ton

Impact On The Environment – Adjusted Standard Vs. 8 Lb/Hr Rule

CROWNLINE

Compliance with MACT– Significantly Reduce VOM Emissions vs. Crownline's Past Operations

- Pre –MACT - Annual VOM emissions approx. 245 tons/yr
- MACT compliance - Annual VOM emissions approx. 195 tons/yr.

Ozone Impact

- EPA Method Ambient Air Quality Impact Analysis
  - Compliance with 8 lb/hr Rule - increase of 0.00533 ppm ozone
  - Compliance with the MACT - increase of 0.00833 ppm
  - Compliance with MACT vs 8 lb/hr Rule - increase of 0.003 ppm ozone
  - Impact on ambient air quality insignificant
  - MACT compliance will not cause an ozone exceedence
  - Would have to triple current emissions to cause 1-hour ozone exceedence

Cross Media Impacts from the Adjusted Standard

- There would not be any adverse cross media impacts
- U.S. EPA - no adverse effect on water quality and energy consumption
- EPA estimates decrease in amount of solid waste generated
- Compliance with MACT - does not cause greater cross media impacts than 8 lb/hr Rule

Factors Relating to Crownline are Substantially and Significantly Different

- 8 lb/hr Rule - promulgated in 1971 as a catch-all provision
- Factors relied upon by the Board involved
  - Protecting ambient air quality
  - Controlling odor
- These purposes <u>not</u> furthered through its application to Crownline:
  - Crownline - negligible impact on AAQ
  - Crownline has odor control technology in place
- Rule was designed to utilize controls already in place

Factors Relating to Crownline are Substantially and Significantly Different *(continued)*

- In 1971 Board did not/could not consider factors peculiar to boat building
  - Emission data and factors for boat building not available until 1991
  - Emission factors were again revised in late 1990's
  - OSHA's worker protection standards for styrene
  - EPA issuance of MACT standard

The Proposed Adjusted Standard is Consistent with Federal Law

- The proposed adjusted standard - consistent
  with / will not violate federal law
- MACT is a federal regulation
- No federal equivalent to the 8 lb/hr Rule
- Adjusted Standard will become part of Illinois SIP

Conclusion

- Purpose of the 8 lb/hr Rule not furthered by imposition on Crownline
- IPCB did/could not consider factors relevant to boat building in enacting 8 lb/hr Rule in 1971
- Adjusted standard will have little negative impact on environment vs compliance with 8 lb/hr Rule.
- EPA studied air emissions from the boat building industry and issued a national standard (MACT) protective of the environment.

Conclusion *(continued)*

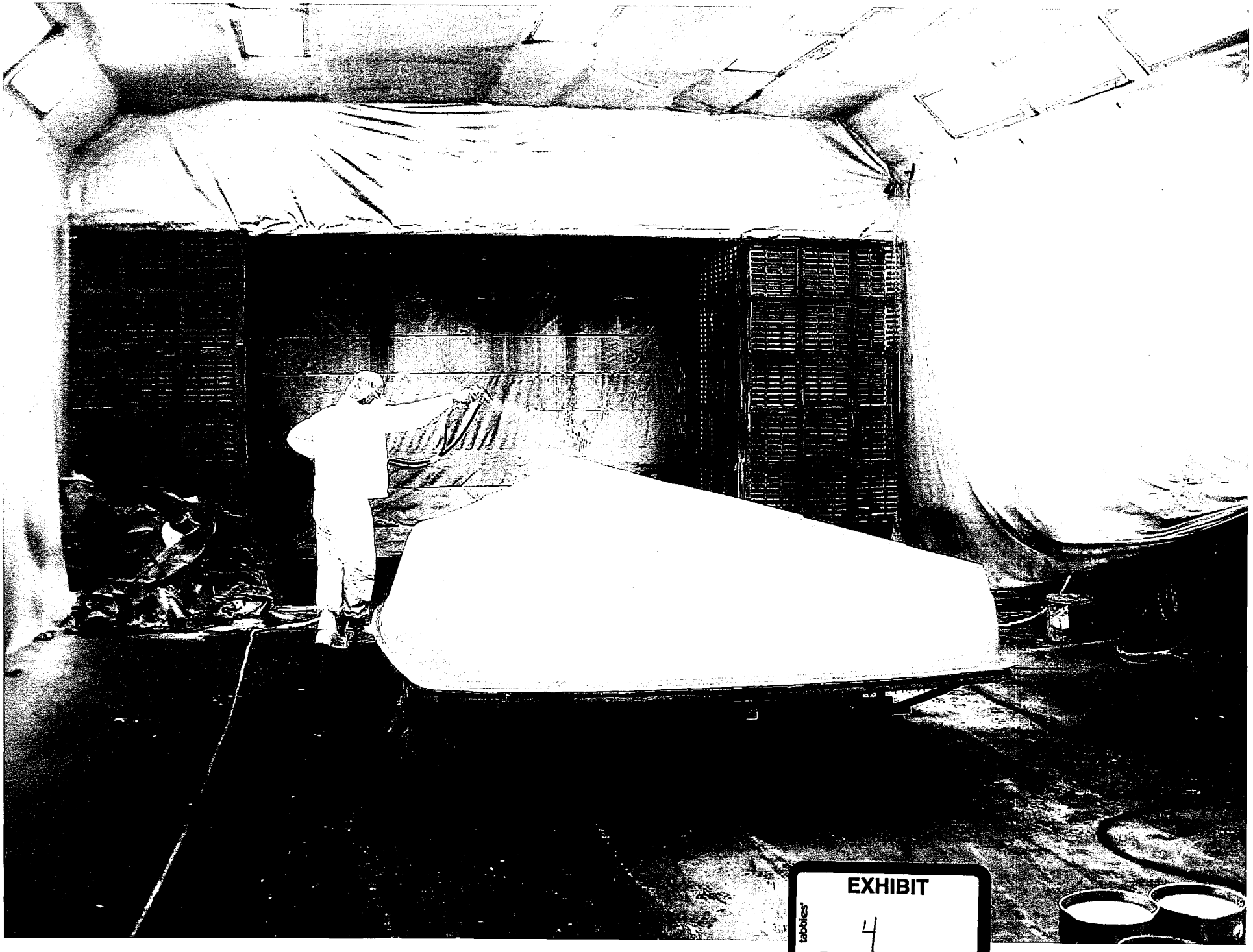
- Capital costs to install tail-stack controls $7 million to $14 million ($35,000 to $58,000 per ton). Annual operational costs - $4.5 to $6 million.

- Alternate manufacturing methods technically or economically impractical for Crownline.

- The high cost of complying with 8 lb/hr Rule will put Crownline at a significant competitive disadvantage.

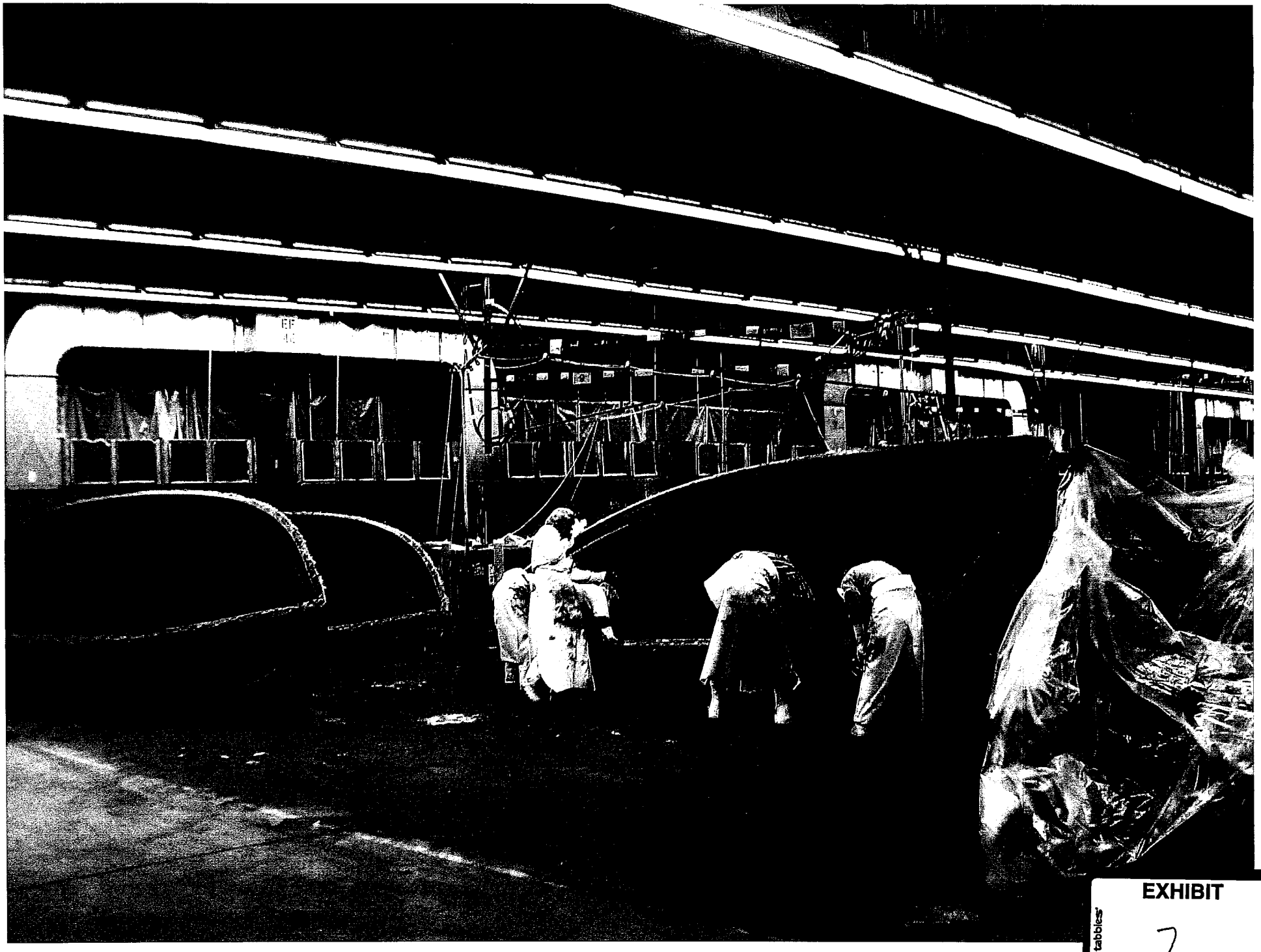
EXHIBIT

5



EXHIBIT

4



EXHIBIT

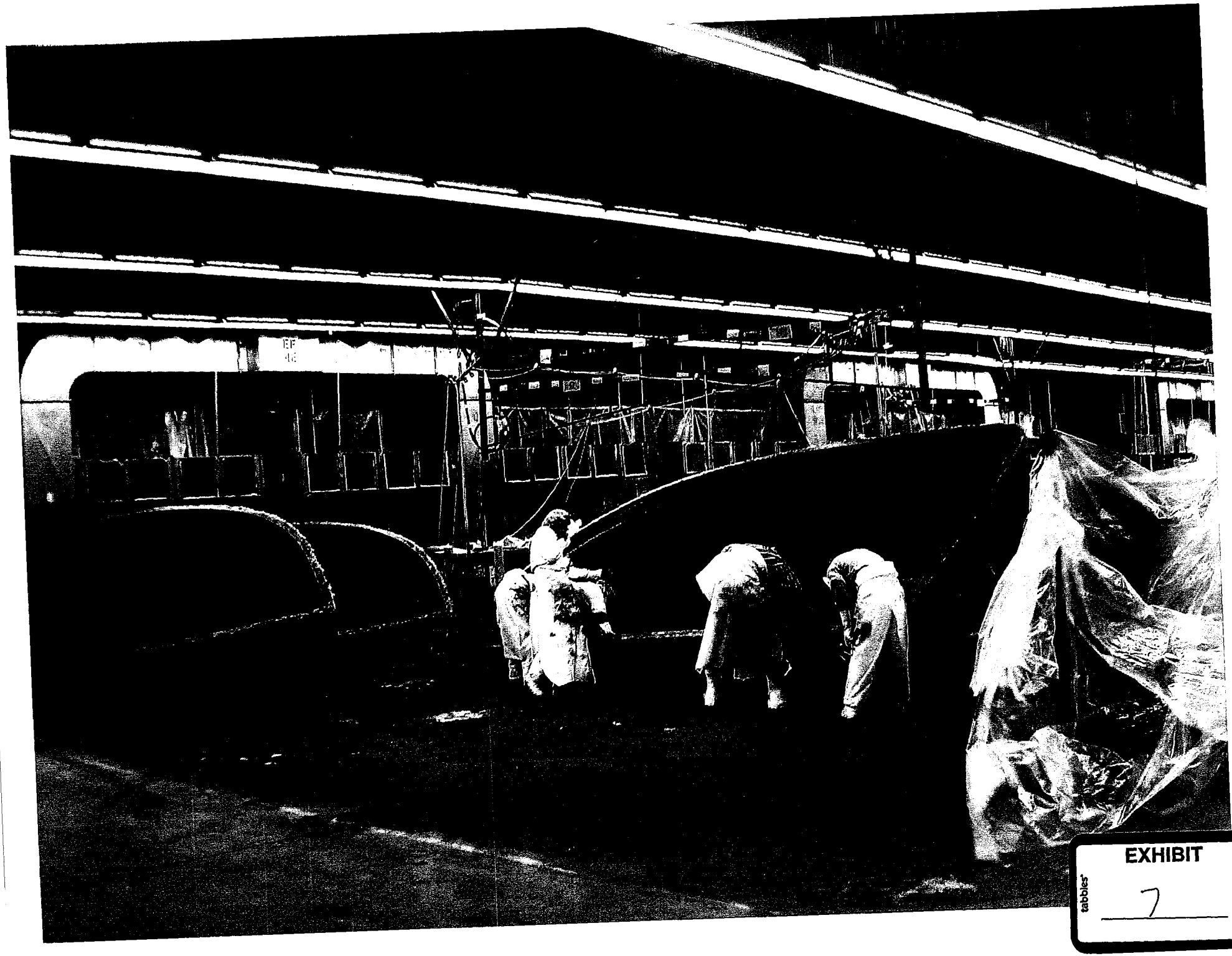
tabbies

7

EXHIBIT

tabbies

6



EXHIBIT

tabbies

7

EXHIBIT

tabbies

8