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BEFORE THE ILLINOIS POLLUTION CONTROL BOARD DEC - 5 2003

IN THE MATTER OF: )  
)  
Petition of Crownline Boats, Inc. ) AS- 04-001  
for an Adjusted Standard from ) (Adjusted Standard)  
35 IAC § 215.301 )

STATE OF ILLINOIS  
Pollution Control Board

**PETITION FOR AN ADJUSTED STANDARD**

Crownline Boats, Inc. ("Crownline"), through its attorneys, Bryan Cave LLP, and pursuant to 35 Ill. Adm. Code § 104.400 et seq., submits this petition to the Illinois Pollution Control Board ("IPCB"), seeking an adjusted standard from 35 Ill. Adm. Code §215.301 (commonly known as the "8 lb/hr Rule") as it applies to the emissions of volatile organic material ("VOM") at Crownline's West Frankfort, Illinois boat manufacturing facility.

**I. BACKGROUND**

Crownline owns and operates a fiberglass boat manufacturing facility in West Frankfort, Illinois. Crownline has always strived to comply with environmental and other regulations that apply to operations at its West Frankfort facility and, until recently, has been able to demonstrate compliance with such rules. In keeping with its desire to comply with applicable rules, Crownline had timely submitted its application for a Clean Air Act Permits Program (CAAPP) operating permit from IEPA. Upon review of the draft CAAPP permit prepared by the IEPA, Crownline discovered that the draft permit did not clearly state how Crownline was to demonstrate compliance with the requirements of the 8 lb/hr Rule. Crownline had proposed to use a form of averaging emissions.

IEPA decided that Crownline could not use averaging to demonstrate compliance. The IEPA stated that the 8 lb/hr Rule specifies a maximum hourly emission rate and, therefore, compliance with the rule would need to be demonstrated on a strict hourly basis, not on an average from any longer time period.

With assistance from its environmental consultant, Advance Environmental Associates, LLC (AEA), Crownline computed the VOM emissions from the building of a boat hull and deck, respectively. Crownline discovered that, based on IEPA's strict hourly interpretation of demonstrating compliance, the hourly VOM emissions from certain of its operations (gelcoat and resin application) did not appear to comply with IEPA's interpretation of the 8 lb/hr Rule.

Crownline met with IEPA and presented evidence demonstrating why requiring Crownline's compliance with the 8 lb/hr Rule on a strict hourly basis is unreasonable and showing that compliance on an averaging basis would not cause any measurable negative impact on ambient air quality from the amount of VOMs Crownline's operations emit. After hearing and considering the information presented by Crownline, its consultant and attorney, IEPA agreed that applying the 8 lb/hour Rule to Crownline's operations on a strict hourly basis would

indeed impose an unreasonable burden and encouraged Crownline to file a petition for an adjusted standard. On November 13, 2003 IEPA issued Crownline a Title V CAAPP Permit and Title I Permit, I.D. # 055070AAU, (the "Title V Permit"). The Title V Permit provides that Crownline is to obtain an adjusted standard from 35 IAC §215.301 or demonstrate compliance with §215.301 by December 31, 2004.

After carefully examining its options for add-on controls and/or for changing manufacturing methods/equipment to reduce Crownline's levels of hourly VOM emissions, Crownline realized that the cost for compliance via either of these options will neither allow the Company to remain competitive nor profitable. Consequently, Crownline has concluded to petition the IPCB for an adjusted standard.<sup>1</sup>

Accordingly, Crownline offers the following summary of reasons as to why it should receive an adjusted standard with respect to the 8 lb/hr Rule:

- The purpose of the 8 lb/hr Rule (as originally drafted) is to reduce the potential for creating ozone in the atmosphere and, thereby, possibly causing the 1-hour ozone standard to be exceeded. The potential for the level of VOM emissions from Crownline's operations to cause or significantly contribute to an exceedence of the ozone standard is very low.
- By August 23, 2004, all boat manufacturers including Crownline, must meet the newly promulgated National Emission Standard for Hazardous Air Pollutants for Boat Manufacturing Facilities (the "MACT"), found at 40 CFR Part 63 Subpart VVVV. EPA estimates that the annual cost for a facility to comply with the MACT is \$4,060/ton of hazardous air pollutants removed and will reduce styrene emissions by an average of 36%. 66 FR 44222. Crownline took steps early to comply with the MACT and came in to compliance with the MACT emission limits more than a year prior to the deadline.
- Technical and regulatory constraints (high air flow needed to ventilate building air in order to comply with OSHA worker health & safety standards) make the cost for Crownline to comply with the 8 lb/hr Rule on a strict hourly basis using tail stack emission controls unreasonably high.
- The capital costs to install tail-stack controls for Crownline to comply with the 8 lb/hr Rule on a strict hourly basis would range from approximately \$7 million to \$14 million. 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.
- Although some alternate methods for manufacturing fiberglass reinforced plastic (FRP) products exist, very few of them can be technically or economically applied to a boat

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<sup>1</sup> To the extent the IPCB does not grant Crownline an adjusted standard pursuant to this Petition, Crownline reserves all rights and defenses it may have concerning the application of the 8 lb/hr Rule to Crownline's operations, and this Petition shall not act as a waiver of such rights or defenses, nor as an admission of positions taken by IEPA.

manufacturing operation such as Crownline's and none of them will actually allow Crownline to fully comply with the 8 lb/hr Rule on a strict hourly basis.

- The high cost of using either tail stack emission controls or very expensive alternative production methods (those requiring complete re-tooling and re-design of production methods and procedures), will put Crownline at a significant competitive disadvantage relative to boat manufacturers in other states. This will result in one of the following scenarios:
  - To remain competitive, Crownline will be forced to move to another state which does not have an 8 lb/hr Rule (or any similar limitation); or
  - Crownline will eventually be forced out of business because it will not be able to compete for customers due to the high cost of its boats and/or due to the diminished quality/durability of its boats.

## II. 35 ILL. ADM. CODE § 104.406 REQUIREMENTS

### A. Standard From Which Relief is Sought -- § 104.406(a)

Crownline requests an adjusted standard from 35 Ill. Adm. Code § 215.301 (Use of Organic Material, otherwise known as the "8 lb/hr Rule"). Illinois' organic material emission limitations were originally promulgated as Rule 205 in 1971. Section 215.301 now provides:

"No person shall cause or allow the discharge of more than 3.6 kg/hr (8 lbs/hr) of organic material into the atmosphere from any emission source, except as provided in Sections 215.302, 215.303, 215.304 and the following exception: If no odor nuisance exists the limitation of this Subpart shall apply only to photochemically reactive material."

35 Ill. Adm. Code § 215.101 states that "the definitions of 35 Ill. Admin. Code 201 and 211 apply to this part." Pursuant to 35 Ill. Adm. Code § 201.102, "emission source" means "any equipment or facility of a type capable of emitting specified air contaminants to the atmosphere." Additionally, § 211.4250(b) defines "organic material" as:

"Any chemical compound of carbon including diluents and thinners which are liquids at standard conditions and which are used as solvers, viscosity reducers, or cleaning agents, but excluding methane, acetone, carbon monoxide, carbon dioxide, carbonic acid, metallic carbonic acid, metallic carbide, metallic carbonates, and ammonium carbonate."

### B. Nature of the Regulation of General Applicability – Section 104.406(b)

This regulation was promulgated to implement the federal requirements under the Clean Air Act, 42 USC § 7401 et seq.

### C. Level of Justification – Section 104.406(c)

The regulation of general applicability from which Crownline seeks an adjusted standard does not specify a level of justification for an adjusted standard.

D. Facility and Process Description – Section 104.406(d)

Crownline operates a fiberglass boat manufacturing facility in West Frankfort, Illinois. Crownline manufactures approximately 30 different models of personal recreation fiberglass boats ranging from a 17'6" open bow boat, to a 29' cabin cruiser. Since it began operations in 1991, Crownline has manufactured approximately 40,000 boats for dealers world-wide and currently manufactures approximately between 15-20 boats each day. The facility began operation in 1994 and employs approximately 500-600 individuals. Additional information regarding Crownline's history and operations (along with photographs) are set forth Sections 1 and 2 of the attached Technical Document.

Crownline's boat manufacturing production process involves the following production areas:

- Mold Fabrication – boat molds are built;
- Gelcoat Application – applying gelcoat (which is the exterior coating of the boat) coating to the pre-formed boat molds;
- Lamination – applying glass fibers, polyester resin and catalysts to the boat mold to constitute the fiberglass structure of the boat;
- Grind & Trim – cutting excess material from the fiberglass parts, smoothing surfaces, and laminated floor support structures and floor to hull;
- Woodworking
- Upholstery – assembling the seats and other vinyl fabric products required in the boats;
- Final Assembly – assembling the hulls and decks and installing mechanical equipment; and
- Shipping.

This petition is primarily concerned with the gelcoat and lamination production areas, which generate most of Crownline's VOM emissions (the majority of which consists of styrene), and are therefore the two production areas most impacted by the 8 lb/hr Rule.<sup>2</sup> Accordingly, the following discussion shall provide details regarding these two production areas.

**Gelcoat Application.** Once the molds leave the Mold Fabrication Shop, where they are prepared for the application of gelcoat by being cleaned with a stripping solvent and a wax releasing agent applied, the molds are moved to one of four gelcoat booths for the application of gelcoat. Gelcoat is applied to the part (hull or deck mold) in a single application (using air atomized spray guns), thereby, creating a single initial layer. (See Photographs in Appendix 2 of the Technical Document). The gelcoat area has thirty-one air atomized spray guns. Gelcoat is

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<sup>2</sup> It should be noted however, that Crownline's other production areas using adhesives, lacquers and caulks, would also not meet the 8 lb/hr Rule on a strict hourly basis. See Section 3.2 of the Technical Document for a discussion of emissions from these operations.

applied to the mold to provide color and a smooth surface to the outside of the fiberglass boats. Crownline uses the following worker protection/pollution control equipment in its gelcoat production area:

- a high volume (180,000 cfm) ventilation system to ensure that styrene levels are below the worker exposure limit established by OSHA;
- dedicated spray booths to reduce the contamination of plant air when using spray guns;
- use of a lower styrene-content gelcoat ( 33.4%); and
- panel filters built into the spray booth to control particulate emissions from the overspray of the spray guns.

**Lamination.** After the gelcoat has dried, the molds are moved to one of twenty-four laminating stations. At the laminating station, glass fibers, polyester resin and a resin catalyst are applied to the mold using non-atomized flow-coat chopper guns (“flow-coat guns”). (See Photographs in Appendix 2 of the Technical Document). The lamination area has twenty-four flow-coat guns with a maximum capacity to use all twenty-four guns simultaneously. The flow-coat guns cut the glass fibers into predetermined lengths and then coats the glass with resin before both are deposited simultaneously on the mold surface. The layer of fiberglass and resin is then rolled flat using hand rollers to remove any air bubbles that were created in the application and allowed to cure. Laminate is applied to a part in a series of layers called “skins”. The process involves application of a skin, followed by a curing period before the next skin can be applied. This process is repeated until all of the required number of skins have been applied and have cured. For decks, 3 resin skins are typically applied. For hulls, 2-3 resin skins are applied, followed by a separate application to build the boat floor. The time required for applying one skin varies depending on the size of the boat. Crownline uses the following worker protection/pollution control equipment in its laminating stations:

- an elaborate ventilation system (160,000 cfm) to vent air emissions to ensure that styrene levels are below the worker exposure limit established by OSHA and to reduce outdoor odors;
- panel filters built in each side of the laminating area to control particulate emissions; and
- submerged-fill resin tanks to reduce splashing and the amount of volatiles coming off the tanks.

For the year 2002, Crownline’s estimated VOM emissions totaled 187 tons/yr as reported on the facility’s 2002 Annual Emission Report. As previously discussed, Crownline’s emissions consists primarily of styrene. Crownline’s use of styrene and related VOM emissions from the resin lamination and gelcoat processes at its plant vary depending on the type and size of each custom boat it manufactures. The calculations for estimating VOM (styrene) emissions from Crownline’s operations are presented in Section 3 of the Technical Document.

As discussed below, based upon an Ambient Air Quality Impact Analysis performed by AEA, Crownline’s emissions, if this adjusted standard petition is granted, will not cause ozone

exceedences in south-central Illinois.

**Compliance with the New MACT Standard.** Beginning August 23, 2004, Crownline, like all other boat manufacturers in the U.S., must meet the newly promulgated MACT standard for boat manufacturers. 40 CFR Part 63 Subpart VVVV. The rule requires that subject boat manufacturers meet the “MACT floor”, which is the emission limitations achieved by the best-performing 12% of boat manufacturers in the nation. U.S. EPA determined that the MACT floor for boat manufacturers would not be air pollution control equipment since only one facility in the country uses such equipment. To comply with MACT, most boat manufacturers with open molding operations will use flow-coat guns and low-HAP production materials (resins, gelcoats, adhesives, etc). A flow-coat gun has lower emissions since it is operated at a lower pressure and it has a non-atomized resin delivery system. By complying with the MACT, EPA estimates that boat manufacturers will reduce styrene emissions by an average of 36%.

As previously stated, Crownline is currently in compliance (over a year early) with the new MACT emission limits. To comply with the MACT, Crownline switched to flow-coat guns in its lamination operation (rather than air atomized guns) and resin that has a HAP content of 35% (as opposed to 42%) and gelcoat that has a HAP content of 33.4%.

E. Investigation of Compliance Alternatives: Methods for Reducing VOM Emissions From Crownline’s Boat Manufacturing Operations – Section 104.406(e)

Crownline and AEA investigated compliance alternatives that would help enable Crownline to comply with the 8 lb/hr Rule on a strict hourly basis. Crownline investigated the following alternatives: (1) reducing VOM content in production materials; (2) using alternative operating procedures and methods; and (3) installing end-of-the-pipe emission control technologies. It is important to note, however, that other than end-of-the-pipe emission controls, many of the alternatives investigated would not allow Crownline to comply with the 8 lb/hr Rule on a strict hourly basis. In addition, Crownline and AEA could not identify any compliance alternatives to reduce VOM emissions from Crownline’s use of adhesives, lacquer and caulks.

**1. Reducing VOM Content in Production Materials**

Crownline has already reduced the VOM concentration in its production materials in compliance with the MACT. However, while complying with the MACT alone will not reduce Crownline’s emissions to a level satisfactory to meet the 8 lb/hr Rule on a strict hourly basis, further reduction of styrene in the resins (below that needed to comply with MACT) is not currently technically feasible while still maintaining product integrity. This is discussed in further detail in Section 4 of the Technical Document.

**2. Feasibility of Replacing Existing Production Methods with Alternate Production Methods**

There exist various production method alternatives which may result in reduced VOM emissions. Crownline investigated “open molding” methods such as use of rollers for resin

application, pre-preg materials, in-house resin impregnation, and vacuum bagging. Crownline also investigated various "closed molding" methods such as resin transfer molding, resin infusion, and the patented Virtual Engineered Composites (VEC) technology. Each of these alternative manufacturing technologies is discussed in detail in Section 4.2 of the Technical Document and provides an explanation as to why these alternatives are not technologically or economically viable for Crownline. Putting the cost of each alternate manufacturing method aside, there is no quantitative data of which Crownline is aware which accurately shows how much styrene and/or VOM emissions would actually be reduced if any of these methods were to be employed. Moreover, it must be emphasized that although these alternative manufacturing methods would reduce VOM emissions, they would not cause Crownline to meet the 8 lb/hr Rule on a strict hourly basis without add-on controls since they only apply to the lamination process and there are no alternative technologies currently available for the gelcoat, lacquering, caulking, and adhesive operations.

### **3. Feasibility of Applying Tail-End Controls at Crownline to Achieve Reduced Levels of VOM Emissions**

In developing the MACT, U.S. EPA had a number of studies performed to evaluate a variety of emission control technologies for the possibility of serving as the "MACT floor" (i.e., the minimum emission controls a boat manufacturer would have to implement) for HAP (Hazardous Air Pollutant) emission reduction. As a result of these studies, U.S. EPA concluded that none of the technologies should serve as the MACT floor. U.S. EPA concluded this based on the following primary factors<sup>3</sup>:

- With one partial exception, no boat manufacturers employed any tailstack emission control technologies to reduce HAP emissions;
- The very high air flows needed by facilities to comply with OSHA's requirement to maintain worker 8-hr exposure levels for styrene make the cost of emission control systems very high;
- Reduction of HAP content of resins, gelcoat and other materials are achievable and can significantly reduce total HAP emissions without placing an undue financial burden on the boat manufacturing industry.

Crownline, through its consultant, AEA, examined available emission control technologies for specific applicability to Crownline's operations for purposes of complying with the 8 lb/hr Rule on a strict hourly basis. This consisted of obtaining cost quotes from a select number of control system suppliers and inserting these quotes and other Crownline-specific operational parameters into U.S. EPA's spreadsheet for estimating control technology costs on a per ton basis for the boat building industry. Based on this analysis, Crownline has concluded that the installation of emission controls for its operations is cost prohibitive and, therefore, not a feasible option regardless of which technology one may choose to apply.

The up-front capital costs to install tail-stack controls to control VOM emissions range

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<sup>3</sup> See *Assessment of Styrene Emission Controls for FRP/C and Boat Building Industries*, EPA Contract 68-D1-0118, W.A. 156.

from \$7 million to \$14 million and annualized cost for these same controls range from approximately \$4.5 million to nearly \$6 million. Using the EPA methodology for estimating control technology costs, the estimated cost per ton of VOM removed from Crownline's operations if tail-stack controls are installed range from approximately \$35,000 to \$58,000. These costs assume a level of VOM emissions equivalent to MACT compliance as a baseline and installing tail-stack controls having a 85% efficiency. A detailed discussion of these costs is included in Section 4.3 of the Technical Document. These are costs Crownline could not incur and still remain competitive with boat manufacturers outside of Illinois.

The primary reason for these high costs is the very large volume of air (400,000 cfm for gelcoat and laminations areas and 654,000 cfm for all of Crownline's operations) that would have to be treated in order to reduce the emitted VOM. The large volume of air moved through the gelcoat and lamination areas is necessary to maintain compliance with OSHA's 8-hour worker exposure limit for styrene. In order to protect worker health and safety in accordance with this OSHA requirement, Crownline installed a specially designed air flow management system at a cost of approximately \$800,000.

In summary, the application of tailstack emission controls is not a viable method for reducing VOM emissions in order to comply with the 8 lb/hr Rule on a strict hourly basis. The primary basis for this conclusion is the prohibitively high cost of such controls as a result of the high air volumes required to comply with the OSHA 8-hour worker exposure limit for styrene.

#### F. Crownline's Proposed Adjusted Standard – Section 104.406(f)

As set forth above, the rule of general applicability from which Crownline seeks this adjusted Standard prohibits Crownline from emitting "more than 8 lbs/hr of organic material into the atmosphere from any emission source." 35 IAC §215.301. Because IEPA will not allow averaging of emissions to meet this standard, Crownline can not comply with the 8 lb/hr Rule as interpreted by IEPA. Accordingly, Crownline proposes that, in lieu of being subject to 35 IAC §215.301, Crownline shall comply with the MACT Standard finalized at 40 CFR Part 63, Subpart VVVV. As discussed in Section IID of this Petition, in order to comply with the MACT, Crownline must (and has): (1) replace atomized spray guns with flow-coat guns; and (2) use resins with a lower percentage of styrene content (switch from using resins with a styrene content of 42.3% to resins with a styrene content of 35%). According to the MACT Standard, EPA estimates that to comply with the MACT it will cost \$4,060/ton annually and will reduce emissions by an average of 36%.

Crownline proposes the following language for a Board order to impose the adjusted standard:

Pursuant to the authority under Section 28.1 of the Environmental Protection Act, the Board hereby adopts the following adjusted standard. This adjusted standard shall apply solely to Crownline Boats, Inc. ("Crownline"). As an alternative to compliance with 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 complying 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.

G. Quantitative and Qualitative Description of Crownline's Impact on the Environment Before and After the Proposed Adjusted Standard – Section 104.406(g)

Four issues are discussed in detail below concerning Crownline's impact on the environment from the adjusted standard. First, the impact on ambient air quality from VOM emissions from Crownline's operations will not cause ozone exceedences in south-central Illinois. Second, the granting of the adjusted standard being sought by Crownline (and Crownline's compliance with the MACT) will reduce emissions at Crownline's facility as compared to Crownline's past operations and bring more of Crownline's operations in compliance with the 8 lb/hr Rule (on a strict hourly basis) Third, although compliance with the 8 lb/hr Rule (on a strict hourly basis) by Crownline would likely reduce emissions even further, it is possible that Crownline could comply with the 8 lb/hr Rule and still emit the same amount of VOMs if Crownline can somehow extend the time that emissions are released to the atmosphere. Fourth, the proposed adjusted standard does not involve any significant cross-media impacts.

**1. Ozone Impact From Crownline's Current Operations**

An Ambient Air Quality (AAQ) Impact Analysis (the "Analysis") was performed by AEA to estimate Crownline's impact on ozone formation in south central Illinois. The Analysis used a method developed by USEPA, titled, "VOC/NO<sub>x</sub> Point Source Screening Tables" (hereafter referred to as the "Ozone Screening Method") and is discussed in further detail in Section 5.0 of the Technical Document. The Analysis used data from an ozone monitor located in Dale, (Hamilton County<sup>5</sup>), Illinois (the "Dale Monitor") as a basis. The Dale Monitor is located 25 miles ENE of Crownline's facility and is sited in a location appropriate for determining impacts of Crownline's operations on outdoor ambient ozone levels. It should be noted that the Dale Monitor was sited in its present location for reasons not related to Crownline or any of its operations.

The Ozone Screening Method is based on examining the short term (24hr) maximum amount of VOCs and also the average annual amounts of both VOCs and NO<sub>x</sub> that the source in question emits. Using this information, the method requires a computation which produces an ambient air quality ozone concentration value resulting from the facility's operations that is then added to the background air quality levels measured at an ozone monitor considered to be representative of the area that can be impacted by the VOC/NO<sub>x</sub> emissions from the facility. This combined value is then compared to the National Ambient Air Quality Standard (NAAQS) for ozone (1-hour standard) of 0.12 ppm to determine if the impact will cause (or contributed significantly enough) to an exceedence of this 1-hour ozone standard.

After computing the amount of ozone predicted by the Ozone Screening Method, the results show that the potential impact from Crownline's operations will not cause ozone concentrations

at the Dale Monitor to exceed the NAAQS of 0.12 ppm. The maximum level of ozone that the Ozone Screening Method produced is 0.103 ppm.

Quantitatively, based on the daily amounts of VOM currently emitted into the atmosphere by Crownline's operations, it is evident that such emissions do not cause any significant degradation of air quality in south-central Illinois. Since the Crownline plant is located in a rural area (far from any ozone non-attainment area), the total amount of VOMs emitted by the plant itself would not cause any violation of the ozone NAAQS. Furthermore, the majority of Crownline's emissions consist of styrene, a material that is well-known for its rapid degradation (within less than 24 hours).

## **2. Compliance with the MACT Will Reduce VOM Emissions from Crownline's Facility**

Crownline's compliance with the MACT will reduce VOM emissions as compared to Crownline's past operations. Although Crownline is required by law to comply with the MACT emission limits by August 23, 2004 (which Crownline achieved over a year early), this will result in significant reductions in VOM emissions as compared to Crownline's past operations. It is estimated that Crownline's annual VOM emissions from complying with the MACT will be approximately 200 tons/yr. This compares to an estimated 245 tons/yr of VOM which would be emitted by Crownline's operations if it did not comply with the MACT (based upon an equal amount of boats being produced). See Section 3.1 of the Technical Document, for a discussion of these calculations. Moreover, it is logical that with a reduction in the amount of HAP being emitted from the plant because of the MACT Standard, the amount of ozone formed will be reduced. Therefore, qualitatively, if Crownline complies with the proposed adjusted standard, then the impact on air quality in south-central Illinois will be reduced. Furthermore, Crownline's compliance with the MACT Standard, will cause a greater percentage of the models and sizes of boats that Crownline manufactures to be in compliance with the 8 lb/hr Rule on a strict hourly basis.

## **3. Emissions if Crownline Complies With the 8 lb/hr Rule**

If Crownline would comply with the 8 lb/hr Rule (on a strict hourly basis), it is estimated that Crownline's annual VOM emissions would be approximately 144 tons.<sup>4</sup> (See Sections 3.1.3 and 3.1.4 of the Technical Document for further discussion). Although compliance with the 8 lb/hr Rule (on a strict hourly basis) by Crownline would reduce emissions as compared to the MACT, it is theoretically possible that Crownline could demonstrate compliance with the 8 lb/hr Rule on a strict hourly basis and still emit the same amount of VOMs on a daily and annual basis. This would be true if Crownline could somehow extend the time that emissions are released to the atmosphere. For example, instead of emitting 14 lbs of VOM in one hour, if it were technologically possible for Crownline to spread out its gelcoat and lamination application operations over a longer time period, Crownline would comply with the 8 lb/hr Rule (on a strict hourly basis) by emitting 7 lbs in one hour and 7 lbs in the next hour. This approach would allow

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<sup>4</sup> Based upon estimated 2003 boat production data.

Crownline to demonstrate compliance with the 8 lb/hr Rule without any real reduction in the total daily amount of VOMs emitted to the atmosphere. This is one of the reasons why Crownline believes that demonstrating compliance on a strict hourly basis is neither appropriate nor necessary. By complying with the MACT Standard and no other measures, Crownline has achieved significant *real* reductions in the total amount of VOMs emitted on a daily and annual basis.

#### **4. Cross Media Impacts From the Adjusted Standard**

There would not be expected to be any adverse cross media impacts if this Adjusted Standard Petition is granted. U.S. EPA stated in its preamble to the MACT Standard that there would be no adverse effect on water quality and energy consumption from the implementation of the MACT. 66 FR at 44222. With regard to solid and hazardous waste impacts, U.S. EPA explained in its preamble that “the proposed NESHAP will decrease the amount of solid waste generated by the boat manufacturing industry . . . the decrease . . . is directly related to switching to nonatomized resin application equipment (i.e. flowcoaters and resin rollers) . . . because of a greater transfer efficiency of resin from flowcoaters to the part being manufactured . . . [and] consequently reduces the amount of waste from disposable floor coverings, cured resin waste, and personal protective equipment for workers.” *Id.* In addition, if Crownline would install an oxidizer as a tail stack control it will increase the amount of natural gas used by Crownline and concomitantly increase the amount of NOx emitted from Crownline’s facility.

#### **H. Justification – Section 104.406(h)**

Under Section 28.1 of the Environmental Protection Act (the “Act”), the Board may grant an adjusted standard for persons who can justify such an adjustment consistent with subsection (a) of Section 27 of the Act. 415 ILCS 5/28.1. Moreover, if a regulation of general applicability does not specify a level of justification required of a petitioner to qualify for an adjusted standard, the Board may grant individual adjusted standards upon adequate proof that: (1) factors relating to that petitioner are substantially and significantly different from the factors relied upon by the Board in adopting the general regulation applicable to that petitioner; (2) the existence of those factors justifies an adjusted standard; (3) the requested standard will not result in environmental or health effects substantially and significantly more adverse than the effects considered by the Board in adopting the rule of general applicability; and (4) the adjusted standard is consistent with any applicable federal law.

#### **1. Factors Relating to Crownline are Substantially and Significantly Different**

The factors relating to Crownline’s operations are substantially and significantly different than the general factors relied upon by the Board in promulgating 35 IAC §215.301. Rule 215.301 was first promulgated in 1971 as Chapter 2: Air Pollution, Rule 205. 4 PCB 191, R71-23. Because it was adopted over 30 years ago, it is difficult, if not impossible, to know exactly what factors the Board relied upon in adopting this rule. However, based upon Illinois Pollution Control Board case law and a common sense reading of the rule, Crownline believes that the factors primarily relied upon by the Board involved concerns about preventing ozone formation.

In fact, it appears that the main intent of the rule was to ensure that operations emitting organic material utilized control equipment already in place to ensure that their facilities do not cause a violation of the one-hour ozone standard nor create an odor nuisance. For example, in Illinois v. Processing and Books, Inc., the IPCB explained that:

“Rule 205: Organic Material Emission Standards serves both to achieve and maintain compliance with the federal air quality standard for photochemical oxidants (0.08 ppm for one hour not to exceed more than once per year, 36 Fed. Reg. 22385 Nov. 25, 1971) and to prevent local nuisances. . . . the major purpose of these regulations is for control of photochemical oxidants. In addition, odor causing organic emissions were included if a local odor nuisance exists . . . these provisions are designed to require the use of equipment that is already in use at numerous facilities . . .”

1977 WL 9986, \*4 (Ill. Pol. Control. Bd.). From this explanation it is evident that the Board was most concerned with: (1) protecting ambient air quality by preventing any violation of the 1-hour ozone NAAQS; and (2) controlling any odor nuisances from manufacturing operations. A review of Crownline’s operations shows that the main purposes of this rule are not furthered through its application to Crownline: first, as thoroughly discussed in Section II.G. of this petition, the daily amounts of VOM emitted by Crownline’s operations have a negligible impact on ambient ozone levels and would not cause a violation of the ozone NAAQS; and second, Crownline has control technology in place to ensure that its operations do not cause an odor nuisance.

The above quote from the Illinois Pollution Control Board also shows that, when adopting the rule in 1971, the Board most likely relied upon the fact that facilities would have no problem complying with the rule by utilizing equipment already available and in use by most facilities subject to the rule. It is clear that this rule was promulgated as a catch-all provision, intending to cast a wide net over all operations which emit organic materials. However, the Board could not possibly have contemplated all the circumstances in which organic material is emitted, and, in fact, there is no indication that the Board considered the factors peculiar to boat building when adopting this rule.

There are other substantial and significant factors which are inherent or otherwise necessary to Crownline’s operations that the Board did not consider (nor could it have) when it adopted the 8 lb/hr Rule in 1971. Not only are the factors relating to boat building significantly different from most manufacturing operations which emit organic material, but emission data from boat building was not even available to the Board until after 1991. The building of a fiberglass boat hull or deck involves a batch-type process (of applying layers or skins), rather than a continuous application process. This is an important distinction because compliance with the rule can be reasonably accomplished and demonstrated when manufacturing operations (that involve the use of materials that emit VOMs) are of a continuous nature or, are at least are distributed more evenly over a 24 hour period. For continuous or near-continuous operations, the use of emission controls, as provided by 35 IAC 215.302, is economically feasible. Due to the large size of the parts (boat hulls and decks) and necessary batch-type sequence of the gelcoat and resin application processes at Crownline, they are neither continuous nor evenly distributed

over a longer period of time.

Additionally, the advent of OSHA's worker protection regulation at 29 CFR 1910, requires manufacturers who use materials that contain and emit styrene to maintain an in-plant work area atmosphere (worker breathing air) of less than 100 ppm. To do so, Crownline had to install a large ventilation system that exhausts approximately 654,000 cubic feet of plant air every minute. This makes the use of add-on emission controls for Crownline's operations fiscally impractical. The Board could not have possibly anticipated this OSHA requirement and its affect when it made its decision to adopt the 8 lb/hr Rule for all manufacturing facilities in the State.

Because the Board could not (and did not) consider these factors relating to Crownline's operations, Crownline contends that it is unreasonable to expect it to demonstrate compliance with the 8 lb/hr Rule on a strict hourly basis.

## **2. The Existence of Those Factors Justifies an Adjusted Standard**

As discussed fully in Section II.E. of this petition, Crownline has investigated numerous compliance alternatives that have proven to be neither economically nor technically feasible due to the substantially different factors relating to fiberglass boat manufacturing operations. The existence of these factors, coupled with IEPA's endorsement of Crownline's efforts to obtain an adjusted standard justifies the granting of an adjusted standard.

## **3. The Requested Standard Will Not result in Adverse Environmental or Health Effects.**

As discussed previously in Section II.G. of this petition, the requested adjusted standard will have little, if any, adverse impact on the environment or health. By complying with the MACT, Crownline has replaced its atomized spray guns with flow-coat guns in its lamination area and uses lower styrene content resins, thus reducing its VOM emissions and also decreasing the amount of solid and hazardous waste Crownline generates. Even without these changes, Crownline's operations do not cause or contribute to any ozone exceedences in south-central Illinois.

## **4. The Proposed Adjusted Standard is Consistent with Federal Law**

The granting of this proposed adjusted standard is consistent with federal law and will not violate any provision of the federal Clean Air Act. Specifically, there is no Clean Air Act equivalent rule or regulation prohibiting boat manufacturers' emissions of organic material in excess of 8 lbs/hr, on a strict hourly basis. Because Crownline is proposing to comply with the new federal MACT for boat manufacturers as part of the adjusted standard, the proposed adjusted standard is consistent with federal law. Moreover, under federal law, the Board's grant of this adjusted standard will be submitted to U.S. EPA for inclusion in Illinois' SIP. It will thus comport with federal procedural requirements.

I. Consistency with Federal Law – Section 104.406(i)

See discussion immediately above.

J. Hearing – Section 104.406(j)

Crownline requests a hearing in this matter.

K. Supporting Document – Section 104.406(k)

The Technical Document and its Appendices are attached to this Petition.


III. CONCLUSION

The requested adjusted standard should be granted as an alternative to Crownline's compliance with 35 IAC §215.301. To require Crownline to comply with the rule of general applicability would result in substantial economic hardship to Crownline. Moreover, it is technically impractical for Crownline to comply with the requirements of the 8 lb/hr Rule on a strict hourly basis.

**WHEREFORE**, Crownline Boats, Inc. respectfully requests an adjusted standard from 35 IAC § 215.301 as set forth herein.

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

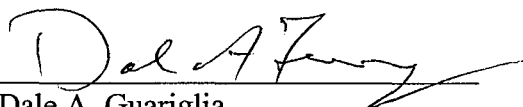
Attorneys for Crownline Boats, Inc.

CERTIFICATE OF SERVICE

The undersigned certifies that a copy of the foregoing petition was served upon the following parties on the 4<sup>th</sup> day of December, 2003:

Illinois Pollution Control Board, Attn: Clerk  
100 West Randolph Street  
James R. Thompson Center, Suite 11-500  
Chicago, IL 60601-3218

Division of Legal Counsel  
Illinois Environmental Protection Agency  
1021 North Grand Avenue East  
P.O. Box 19276  
Springfield, IL 62794-9276

  
Dale A. Guariglia

Due to the volume of this pleading,  
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DEC - 5 2003

BEFORE THE ILLINOIS POLLUTION CONTROL BOARD

STATE OF ILLINOIS  
Pollution Control Board

IN THE MATTER OF: )

Petition of Crownline Boats, Inc. )  
for an Adjusted Standard from )  
35 IAC § 215.301 )

AS- 04-001  
(Adjusted Standard)

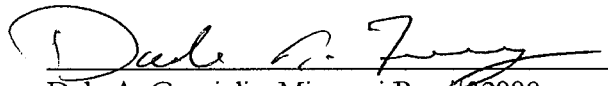
MOTION FOR ADMISSION *PRO HAC VICE*  
ON BEHALF OF CROWNLINER BOATS, INC.

COMES NOW, Dale A. Guariglia, of the law firm of Bryan Cave LLP, and pursuant to Section 101.400 of the Rules of the Illinois Pollution Control Board, files this Motion for Admission *Pro Hac Vice* in this matter on behalf of Crownline Boats, Inc. In support of this Motion, Dale A. Guariglia states as follows:

1. Dale A. Guariglia is in good standing and admitted to practice before all state courts in the State of Missouri.

Respectfully submitted,

BRYAN CAVE LLP

By:   
Dale A. Guariglia, Missouri Bar #32998  
One Metropolitan Square  
211 N. Broadway, Suite 3600  
St. Louis, MO 63102-2750  
Telephone: (314) 259-2000  
Telefax: (314) 259-2020

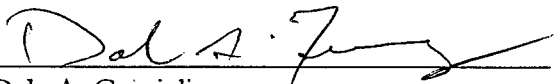
Attorneys for Crownline Boats, Inc.

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Springfield, IL 62794-9276

  
\_\_\_\_\_  
Dale A. Guariglia

DEC - 5 2003

**BEFORE THE ILLINOIS POLLUTION CONTROL BOARD**

STATE OF ILLINOIS  
*Pollution Control Board*

IN THE MATTER OF: )  
)  
Petition of Crownline Boats, Inc. ) AS- 04 001  
For an Adjusted Standard from ) (Adjusted Standard)  
35 IAC § 215.301 )

**MOTION FOR EXPEDITED REVIEW**

Crownline Boats, Inc. ("Crownline"), by and through its attorneys, Bryan Cave LLP, respectfully requests that the Illinois Pollution Control Board consider its petition for Adjusted Standard on an expedited basis. In support of its motion, Crownline provides:

1. Crownline owns a fiberglass boat manufacturing facility at 11884 Country Club Road, West Frankfort, Illinois.

2. In keeping with its desire to comply with applicable environmental regulations, Crownline timely submitted its application for a Clean Air Act Permits Program (CAAPP) operating permit from the Illinois Environmental Protection Agency ("IEPA"). Upon review of the draft CAAPP permit prepared by IEPA, Crownline discovered that the draft permit did not clearly state how Crownline was to demonstrate compliance with 35 IAC §215.301 (commonly known as the "8 lb/hr Rule").

3. Although Crownline had proposed to use a form of averaging emissions to comply with the 8 lb/hr Rule, IEPA decided that Crownline could not use averaging to demonstrate compliance and that Crownline would need to demonstrate compliance on a strict hourly basis.

4. Crownline determined that, based on IEPA's strict hourly interpretation of demonstrating compliance with the 8 lb/hr Rule, the hourly volatile organic material ("VOM") emissions from certain of its operations did not appear to comply with IEPA's interpretation of the rule.

5. Crownline met with IEPA and presented evidence demonstrating why requiring Crownline's compliance with the 8 lb/hr Rule on a strict hourly basis is unreasonable and showing that compliance on an averaging basis would not cause any measurable negative impact on ambient air quality from the amount of VOMs Crownline's operations emit. After hearing and considering the information presented by Crownline, IEPA agreed that applying the 8 lb/hour Rule to Crownline's operations on a strict hourly basis would indeed impose an unreasonable burden and encouraged Crownline to file a petition for an adjusted standard.

6. On November 13, 2003 IEPA issued Crownline a Title V CAAPP Permit and Title I Permit, I.D. # 055070AAU, (the "Title V Permit"). The Title V Permit provides that Crownline is to obtain an adjusted standard from 35 IAC §215.301 or demonstrate compliance with §215.301 by December 31, 2004.

7. After carefully examining its options for add-on controls and/or for changing manufacturing methods/equipment to reduce Crownline's levels of hourly VOM emissions, Crownline realized that the cost for compliance via either of these options will neither allow the Company to remain competitive nor profitable. Consequently, Crownline has concluded to petition the Illinois Pollution Control Board for an adjusted standard.

8. Crownline believes that its proposed adjusted standard is reasonable in light of the fact that its VOM emissions will meet the emissions limitations of U.S. EPA's newly promulgated National Emission Standard for Hazardous Air Pollutants for Boat Manufacturing Facilities, found at 40 CFR 63 Subpart VVVV, and because its proposal will not result in adverse environmental or health effects.

9. Crownline believes that the information necessary for the Board to proceed with its review of this matter is contained in Crownline's petition. If more information is needed, Crownline will fully cooperate to expeditiously provide such information to the Board and its hearing officer.

10. This motion for expedited review is being filed at the request of IEPA and to allow Crownline to be in compliance with the December 31, 2004 deadline in its Title V Permit.

11. The undersigned attests that the facts contained in this Motion are true.

WHEREFORE, Crownline respectfully requests that the Board grant this motion and expedite review of its petition for adjusted standard.

Respectfully submitted,

BRYAN CAVE LLP

By:

  
Dale A. Guariglia, Missouri Bar # 32998

One Metropolitan Square  
211 N. Broadway, Suite 3600  
St. Louis, Missouri 63102  
Telephone: (314) 259-2000  
Telefax: (314) 259-2020

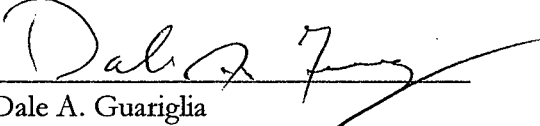
Attorneys for Crownline Boats, Inc.

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Dale A. Guariglia

BEFORE THE ILLINOIS POLLUTION CONTROL BOARD

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DEC - 5 2003

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STATE OF ILLINOIS  
Pollution Control Board

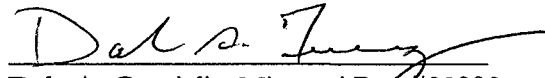
NOTICE OF APPEARANCE

PLEASE TAKE NOTICE that the undersigned hereby appear as counsel for  
petitioner Crownline Boats, Inc. Motion for Admission *Pro Hac Vice* is pending.

Respectfully submitted,

BRYAN CAVE LLP

By:



Dale A. Guariglia, Missouri Bar #32998  
One Metropolitan Square  
211 N. Broadway, Suite 3600  
St. Louis, Missouri 63102-2750  
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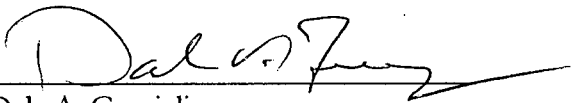
Attorneys for Crownline Boats, Inc.

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