BEFORE THE ILLINOIS POLLUTION CONTROL BOARD

IN THE MATTER OF:	)	
	)	
PETITION OF ROYAL FIBERGLASS POOLS, INC. FOR AN ADJUSTED STANDARD FROM 35 ILL. ADM. CODE 215.301	)	AS 09-4 (Adjusted Standard - Air)

POST HEARING BRIEF OF PETITIONER ROYAL FIBERGLASS POOLS

Royal Fiberglass Pools, Inc. ("Royal"), through its attorneys, Bryan Cave LLP, submits this Post Hearing Brief.

On July 17, 2009, Royal submitted its First Amended Petition For An Adjusted Standard ("First Amended Petition") to the Illinois Pollution Control Board ("IPCB"), seeking an adjusted standard from 35 Ill. Adm. Code §215.301 (Use of Organic Material, otherwise known as the "8 lb/hr Rule") as it applies to the emissions of volatile organic material ("VOM") at Royal's Dix, Illinois swimming pool manufacturing facility. Section 215.301 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."

On August 20, 2009, the Illinois Environmental Protection Agency ("Illinois EPA") filed with the IPCB its Recommendation that Royal's First Amended Petition be granted.

On October 28, 2009, a hearing on this matter was held before Hearing Officer Carol Webb, at which Royal and the Illinois EPA presented testimony.

Royal submits this Post-Hearing Brief in furtherance of its First Amended Petition for an Adjusted Standard.

I. BACKGROUND

A. Facility and Process Description

Royal operates a fiberglass pool manufacturing facility located at 312 Duncan Road, Dix, Illinois (the "Dix Plant"). Royal manufactures twenty different models of fiberglass pools, ranging from 12' wide × 16' long × 3' 10" deep to 17' wide × 40' 6"

long × 8' deep. The Dix Plant began operations in the early 1990s and during peak season employs approximately twenty individuals plus another five to ten contract haulers.

The facility has one large production building in which composite pool manufacturing occurs inside three self-contained rooms, which are called "bays," that are located inside the plant building. Most of the pool production occurs in the two main bays (Bay 1 and Bay 2), but pool finishing, part repair, and some occasional small pool production occurs in the third bay. All three bays are connected to a common exhaust ventilation system. The production bays utilize an approximate 35,000-cfm cross-flow ventilation system that exhausts air from the work areas to the outside atmosphere through a 36 inch diameter, 36 foot tall vertical discharge stack in order to control worker exposure to styrene.

The CAAPP permit application submitted to Illinois EPA in November 2004 requested a maximum facility-wide annual production cap of 400 pools per year, which corresponds to full production (two pools per day) in spring, summer and fall. This same facility-wide annual production cap of 400 pools per year is also included in Royal's modification to its permit application filed on July 14, 2009.

Composite Pool Manufacturing Procedure. The composite pool manufacturing at the Dix Plant consists of three basic process steps, all of which emit VOMs and would be subject to the requested adjusted standard:

1. **Gelcoat application.** Either a thin layer of white gelcoat or two layers (one of which is translucent gelcoat and the other is regular production gelcoat) is applied to each bare waxed pool mold with a Magnum Venus Products ("MVP") high-volume low-pressure fluid impingement technology applicator gun. The gelcoat applicator is operated as an atomizing gelcoat spray gun. The white gelcoat used at Dix contains 27% styrene monomer by weight and 3% methyl methacrylate (MMA) by weight. The two layer gelcoats range from 27% - 38% styrene and 3% - 10% MMA. This gelcoat is the state-of-the-art in low-HAP formulations for swimming pool production.

2. **Barrier coat resin application.** A 100 to 120 mil (0.100 to 0.120") laminate layer of three ounce glass mat and vinyl ester ("VE") corrosion-resistant resin is applied to the cured gelcoat layer with the same MVP applicator that is used to apply gelcoat. However, the gelcoat tip is replaced with a 5020 VE tip and the pump pressure is adjusted to allow for the non-atomized application of the VE resin. The VE resin contains up to 48% styrene content by weight.

3. **Isophthalic structural resin application.** A series of consecutive laminate layers consisting of 1½ oz. chopped glass strand mat, woven glass roving, and isophthalic ("ISO") corrosion-resistant resin is applied to the cured VE layer with the same MVP applicator that is used to apply the gelcoat and VE

resin. However, the VE tip is replaced with a 7025 ISO resin tip and the pump pressure is adjusted to allow for the non-atomized application of the ISO resin.

Other manufacturing steps include: (1) parts finishing, including trimming, grinding and sanding of finished pools parts; (2) gelcoat and resin cleanup, in which acetone, non-HAP and non-VOC cleaning solvent is used to clean gelcoat and resin residues from the application equipment and roller tools; and (3) mold repair and mold prep, in which very small amounts of tooling gelcoat and tooling resin are used to repair the molds and a small quantity of mold cleaner, mold sealer, and mold release (called mold wax), is used to prepare the bare mold for gelcoat application. These other steps do not have significant amounts of VOM emissions.

B. Procedural Background

Royal has always strived to comply with environmental and other regulations that apply to operations at the Dix Plant. In keeping with its desire to comply with applicable rules, in November of 2004, Royal submitted an application for a Clean Air Act Permits Program ("CAAPP") operating permit from the Illinois EPA.[1/] To date, a permit has not been issued. Royal is aware that Illinois EPA has rejected the use of averaging to demonstrate compliance with the 8 lb/hr Rule. The Illinois EPA has 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.

On January 10, 2006, the Illinois EPA issued Violation Notice A-2005-00281 to Royal. After receipt of this Notice, representatives of Royal met with Illinois EPA in person and also corresponded with Illinois EPA regarding the notice. As part of these communications, Royal provided a significant amount of information to Illinois EPA regarding the Dix Plant and the relevant industry. With assistance from its environmental consultant, Engineering Environmental Consulting Services ("EECS"), Royal computed the VOM emitted during the manufacture of the various pools Royal constructs. Royal discovered that, based on Illinois EPA'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.

After carefully examining its options for add-on controls and/or for changing manufacturing methods/equipment to reduce Royal's levels of hourly VOM emissions, Royal realized that the cost for compliance via either of these options will neither allow it to remain competitive nor profitable, and will force closure of the Dix Plant. Royal met with Illinois EPA and presented evidence demonstrating why requiring Royal's compliance with the 8 lb/hr Rule on a strict hourly basis is unreasonable. After considering the information presented by Royal, Illinois EPA agreed that applying the 8 lb/hour Rule to Royal's operations on a strict hourly basis would indeed impose an unreasonable burden. Royal and Illinois EPA agreed that Royal should apply for an adjustment from the 8 lb/hr Rule.

[1/] On July 14, 2009, Royal submitted to Illinois EPA a modification to its CAAPP permit application.

C. Facility Air Emissions

1. ***VOM Emissions Estimates.*** The VOM emissions from the Dix Plant vary depending on the type and size of each swimming pool part. The facility emissions consist predominately of styrene, but also include small amounts of other VOM and volatile organic HAP species such as methyl methacrylate ("MMA"). The average VOM emissions per pool for the gelcoating process is 53.8 lbs of VOM. The resin process averages 94.4 lbs of VOM emitted per pool. The total average VOM emitted per pool is 148.8 lbs. The maximum facility-wide hourly VOM emission rate is 156.70 lbs per hour. Annual VOM emissions at the Dix Plant for 2007 and 2008 were 14.8 tpy and 11.6 tpy, respectively. Royal's current CAAPP application estimates the Dix Plant's maximum VOM emissions at about 29.76 tpy, approximately 27.54 tons of which relate to potential styrene emissions. Additional information regarding Royal's VOM emissions, is set forth in Royal's First Amended Petition.

2. ***Compliance with the Composites MACT.*** Royal is currently subject to the National Emission Standard for Hazardous Air Pollutants for reinforced plastic composite manufacturing facilities, found at 40 CFR Part 63 Subpart WWWW (the "MACT"). EPA estimates that industry-wide, compliance with the MACT will reduce styrene emissions from subject facilities by an average of 43%. Royal has been in continuous compliance with the MACT since it became effective. The MACT required that subject facilities similar to Royal's be in compliance with the work practice standards contained therein by April 21, 2006. Royal was in compliance with the MACT by February 2006. To comply with the work practice standards in the MACT, Royal adopted standards requiring that all resin containers are closed when not in use, and implementing the use of acetone, which has no HAP or VOM emissions. Royal meets the MACT emission standards by using the HAP emissions factor averaging option (see 40 CFR 63.5810(b)) and Royal has continually been in compliance with the emission limits set forth in the MACT.

II. DISCUSSION

Pursuant to Section 28.1(c) of the Illinois Environmental Protection Act, 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 whenever the Board determines, upon adequate proof by petitioner, 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.

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

A. Factors Relating to Royal are Substantially and Significantly Different from the Factors Relied upon by the Board in Adopting the 8 lb/hr Rule

The factors relating to Royal's operations are substantially and significantly different than the general factors relied upon by the Board in promulgating the 8 lb/hr Rule. The 8 lb/hr Rule 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, Royal 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 exits . . . 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 Royal's operations shows that the main purposes of this rule are not furthered through its application to Royal: first, as discussed in Section II.G of this First Amended Petition, the daily amounts of VOM emitted by Royal's operations have a negligible impact on ambient ozone levels and would not cause a violation of the ozone NAAQS; and second, Royal has a tall stack in place to minimize odor nuisance from its operations.

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 pool fabrication when adopting this rule.

There are other substantial and significant factors which are inherent or otherwise necessary to Royal's operations that the Board did not consider (nor could it have) when it adopted the 8 lb/hr Rule in 1971. The building of a fiberglass swimming pool 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 I.A.C. 215.302, is economically feasible. Due to the large size of the swimming pool molds and necessary batch-type sequence of the gelcoat and resin application processes at the Dix Plant, 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, Royal had to install a large ventilation system that exhausts approximately 35,000 cubic feet of plant air every minute. This makes the use of add-on emission controls for Royal's operations fiscally impractical. (See discussion below and in Section II.E. of Royal's First Amended Petition). 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.

Finally, on June 15, 2005, EPA revoked the one-hour average ozone standard, which was replaced by an eight-hour average standard. See 69 Fed. Reg. 23951 (Apr. 30, 2005). As referenced by the Board in Illinois v. Processing and Books, Inc., the 8 lb/hr Rule was designed in primary part to assist in achieving compliance with EPA's one-hour average standard. Although Royal is not requesting that the Board revoke the 8 lb/hr Rule, Royal asserts that the elimination of one of the fundamental purposes of the 8 lb/h Rule supports this request for an adjusted standard.

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

B. The Existence of Those Factors Justifies an Adjusted Standard

As discussed in Section II.E. of Royal's First Amended Petition, Royal has investigated numerous compliance alternatives that have proven to be neither economically nor technically feasible due to the substantially different factors relating to Royal's operations (discussed above). The existence of these factors, coupled with IEPA's endorsement of Royal's efforts to obtain an adjusted standard justifies the granting of an adjusted standard.

Royal investigated compliance alternatives that would help enable it to comply with the 8 lb/hr Rule on a strict hourly basis. As discussed below, Royal investigated: (1) reducing VOM content in production materials; (2) using alternative operating procedures and methods; and (3) installing add-on emission control technologies. It is important to note, however, that other than add-on emission controls, many of the alternatives investigated would not allow Royal to comply with the 8 lb/hr Rule on a strict hourly basis. In addition, Royal could not identify any feasible compliance alternatives to further reduce VOM emissions from Royal's operations.

1. Lower VOM Content Materials

Royal has already reduced the VOM concentration in its production materials (gelcoat and resin materials) in compliance with the MACT. Complying with the MACT alone will not reduce Royal's emissions to a level satisfactory to meet the 8 lb/hr Rule on a strict hourly basis. While Royal has inquired of its suppliers regarding lower VOM content production materials, further reduction of styrene in the resins (below that needed to comply with MACT) is not currently technically feasible while still maintaining product integrity.

2. Alternate Operating Procedure and Methods

Royal carefully studied the gelcoating process at the Dix Plant, and considered every recognized alternative procedure and method that might reduce the hourly VOM emissions rate. However, this study revealed inherent process limitations that precluded the use of any effective alternative:

- Composite swimming pools are produced with open molding processes on very large male molds.
- Composite pools are too large to use any closed molding process. Even if closed molding was feasible for the smallest pool model, the gelcoat layer must still be applied to the "open" closed mold with a gelcoat applicator.
- A high-quality gelcoat finish is an essential component of a commercially acceptable composite pool. The pool models are much too large to use a vacuum-formed thermoplastic shell finish, which is the only acceptable alternative finish that is used for smaller spa pools.
- Gelcoat must be applied to the pool mold in a single uniform layer. Gelcoat cannot be applied in separate strips or sections, because the lapped gelcoat seams would be structurally unsound and unsightly.
- Gelcoat must be applied to the mold with an atomizing mechanical applicator. Although non-atomizing gelcoat equipment is available that might reduce the gelcoat emission rate, the available non-atomizing equipment will not provide an acceptable surface finish and has failed to reduce gelcoat emissions as promised by the manufacturer.

- The gelcoat process takes about one hour for the largest pool model and the largest pool model requires at least 360 pounds of gelcoat.
- The white gelcoat used by Royal is state-of-the–art and contains the lowest feasible monomer contents of 27% styrene and 3% MMA. This gelcoat provides a flexible, durable, glossy finish that must resist impact, weathering, temperature extremes, UV radiation, and blistering.
- The emissions from the current gelcoat process cannot be appreciably reduced with any additional workpractice improvements, pollution prevention techniques, or gelcoat material substitutions.
- The application of gelcoat takes place in large work bay areas that require significant amounts of ventilation airflow to protect the workers against styrene exposure. This ventilation is required by OSHA regulations. The relatively large airflow rate and low styrene exposure limits established by OSHA result in a large dilute exhaust stream that cannot be economically controlled with add-on air pollution control equipment. The cost of the lowest-cost control equipment is detailed in the next section.

3. Feasibility of Add-On Air Pollution Controls

The cost and feasibility of add-on air pollution controls at reinforced plastic composite manufacturing facilities has been thoroughly studied and documented as part of the Composites MACT (40 C.F.R. 63 Subpart WWWW). The Dix Plant is fully compliant with the HAP emission limits listed in the MACT standard, averaging 72% of the MACT emissions limit.

According to the MACT, a composites facility such as the Dix Plant is not required to install add-on air pollution controls. During the promulgation and development of the MACT, the United States EPA discovered that add-on air pollution controls are not cost effective at most existing composite facilities. The United States EPA also determined that add-on controls with 95% control efficiency would only be cost effective for new composite facilities that emit more than 100 tpy of HAP or new facility that produces large parts such as swimming pools and emits more than 250 tpy of HAP. The Dix Plant emitted less than 12 tons of HAPs in 2008, so add-on controls would not be cost effective by a very wide margin.

A comprehensive study entitled "*Feasibility and Cost of the Capture and Control of Hazardous Air Pollutant Emissions from the Open Molding of Reinforced Plastic Composites*" prepared by EECS was submitted to United States EPA in April 2000 as part of the promulgation of the Composites MACT rule. This report has 377 pages of information concerning the cost and feasibility of add-on controls at composites facilities.

Very little has changed since the 2000 publication date, except that the cost of electricity and natural gas needed to operate add-on controls has risen dramatically.[2/]

An abbreviated summary of the air pollution control systems, which are detailed in the aforementioned study and are available for use, is contained in the following table:

Commercially Available Air Pollution Controls

Technology		**Applicability Concerns**	**Status at the Dix Plant**
Absorption		Styrene is nearly insoluble in water	infeasible
Adsorption		Styrene polymerizes on sorbent media Desorbed styrene is not reusable Desorbed styrene must be disposed as hazardous waste	infeasible
Biodigestion		Microbes are unreliable and must stay warm and moist Digestion beds must be huge to handle exhaust airflow	infeasible
Condensation		Styrene concentration in air too low to be economic Condensate is mostly water with trace styrene Condensate must be disposed as hazardous waste	infeasible
Flare		Styrene concentration in air is too low to be economic	infeasible
Oxidation	TO	Conventional recuperative oxidation is always more costly than RTO	RTO is better
	RTO	Regenerative thermal oxidation is currently employed at one truck cap plant and several large bathware plants that produce small parts on automated production lines, operate continuously (24 hr/day, 360 days/yr) and have uncontrolled styrene emissions >250 tpy. A RTO system large enough to handle the 35,000 cfm exhaust airflow at the Dix Plant would cost over $600,000 to install and over $300,000 per year to operate.	technically feasible economically infeasible
	CO	Catalytic media has a relatively short lifetime and is unreliable	infeasible
Preconcentration w/RTO		Preconcentration is currently employed at four large bathware plants. The long-term performance of the adsorber in questionable due to an unexpected failure of the activated charcoal sorbent media at one of the sites. A preconcentrator system large enough to handle the 35,000 cfm exhaust airflow at the Dix Plant would cost almost one million dollars to install and operate.	technically questionable economically infeasible

Royal commissioned EECS to prepare a detailed control cost analysis for a skid-mounted RTO system for the Dix Plant. EECS's report of its analysis was submitted to Illinois EPA on June 19, 2009 and was attached to Royal's First Amended Petition. As detailed in this analysis, the skid-mounted RTO control option would have an installed

[2/] Due to the size of this study, Royal is not including a copy with this Brief. It is part of EPA's docket regarding the Composites MACT rule promulgation and adoption. Should the Board desire a copy of the study, Royal would be pleased to provide it to the Board.

capital cost approximately $709,500 and would have annual operating costs of over $470,000 per year. The cost effectiveness for this add-on control would be about $18,400 per ton of styrene and MMA removed per year. As such, the cost effectiveness of the RTO control option is much greater than what is widely regarded as affordable. The annual operating cost of the RTO control options is several times greater than the annual profit for the Dix Plant. Hence, add-on controls are prohibitively expensive and not economically feasible for the Dix Plant.

C. The Requested Standard Will Not Result in Adverse Environmental or Health Effects.

As discussed in Section II.G of Royal's First Amended Petition, the requested adjusted standard will have little, if any, adverse impact on the environment or health. By complying with the MACT, Royal has limited its VOM emissions. Even without these changes, Royal's operations do not cause or contribute to any ozone exceedances. With respect to health effects, Royal notes that Illinois does not have a health standard for styrene emissions, and this manufacturing process is the same process used by swimming pool manufacturers in many other states.

1. ***Air Quality Impact Analysis of Royal's Operations.*** As indicated, the Dix Plant is already in compliance with the MACT, and the proposed adjusted standard will not impact future compliance with the MACT. Additionally, attached to Royal's First Amended Petition is an Air Quality Impact Analysis of the Dix Plant. This analysis presents the worst-case scenario for ozone emissions using the proposed adjusted standard. Based on the results of the analysis, the worst-case one-hour average ozone impact is still only 74% of the one-hour ozone standard. Royal understands that in 2005, EPA replaced the one-hour average ozone standard with an eight-hour average standard, but believes the hourly calculation presented in the Air Quality Impact Analysis is useful given the obvious concerns about hourly emissions that are reflected in the 8 lb/hr Rule.

Should Royal's First Amended Petition be granted, there will not be any increase on a per unit basis over the current emissions from the Dix Plant. Royal's First Amended Petition merely seeks to allow Royal to continue manufacturing in the same manner, and granting the First Amended Petition will not amount to an increase of per unit emissions.

In addition, at the hearing, Dr. Robert Haberlein testified on behalf of Royal regarding the impact to air quality if Royal's adjusted standard was granted. Dr. Haberlein testified that Royal's emissions will have a negligible effect on ozone and air quality. (Hearing Transcript, pgs. 25- 27, 31-32). In addition, although the Air Quality Impact Analysis attached to the First Amended Petition indicates that the worst case one-hour average ozone impact is 4 ppb, Dr. Haberlein testified at the hearing that based on Scheffe Table 1, which was used for the analysis, the lowest ozone impact possible from the Table is 4 ppb for any source less than 50 tons of VOM per year, but that the actual worst case impact from Royal operations is probably much less than 4 ppb.

2. ***Cross-Media Environmental Impacts Resulting from an Adjusted Standard.*** There should be no negative cross environmental impacts resulting from the requested adjusted standard. In general, the Dix Plant's waste and wastewater generation is independent of VOM emissions, thus no significant change in the nature or volume of waste and wastewater generation is anticipated. However, as part of MACT compliance, Royal converted its resin spray applicators to low-emitting non-atomized applicators. The non-atomized applicators reduce the amount of overspray, and therefore the amount of solid and hazardous waste generated. Although not required by the MACT standard, Royal has eliminated all colored backcoat gelcoats and now uses just white backcoat. This requires less flushing of the gelcoat lines, and as a result, less waste gelcoat material is generated.

D. The Proposed Adjusted Standard is Consistent with Federal Law

The granting of the 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 swimming pool manufacturers' emissions of organic material in excess of 8 lbs/hr, on a strict hourly basis. Because Royal is proposing to comply with the MACT, the proposed adjusted standard is consistent with federal law.

III. ROYAL'S PROPOSED ADJUSTED STANDARD

As set forth in Royal's First Amended Petition, Royal proposes the following language for a Board order to impose the adjusted standard:

1. Pursuant to Section 28.1 of the Environmental Protection Act ("Act") (415 ILCS 5/28/1), the Board grants Royal Fiberglass Pools ("Royal") an adjusted standard from 35 Ill. Adm. Code. 215.201 ("8 lb/hr Rule"), effective _____, 20__. The adjusted standard applies to the emissions of volatile organic material ("VOM") into the atmosphere from Royal's swimming pool manufacturing facility located in Dix, Illinois.

2. 35 Ill. Adm. Code 215.301 does not apply. Royal remains subject to the following:

   a. Royal must continue to investigate: (a) swimming pool production methods that generate fewer VOM emissions, and (b) materials that have a reduced VOM content and/or are compliant with the Composites MACT HAP content. Where practicable, Royal must substitute current materials with lower VOM content materials as long as such substitution does not result in a net increase in VOM emissions.

   b. Royal must perform any reasonable test of new technologically or economically reasonable production methods or materials applicable to

the open-mold swimming pool manufacturing industry, which may reduce VOM emissions at Royal's facility which the Illinois Environmental Protection Agency (Agency) specifically requests in writing they do. After performance of such tests, Royal must prepare and submit a report summarizing the activities and results of these investigatory efforts. The report must be submitted to the Agency, Bureau of Air, Compliance and Enforcement Section.

c. Royal must operate in full compliance with the Clean Air Act, its Clean Air Act Permit Program permit (once issued), the National Emissions Standard for Hazardous Air Pollutants for Reinforced Plastic Composite Manufacturing Facilities, set forth in 40 C.F.R. 63, Subpart WWWW, as required by Section 9.1(a) of the Act, and any other applicable regulation.

Significantly, this proposed adjusted standard is consistent with prior adjusted standards from the 8 lb/hr Rule issued by the IPCB for similar manufacturing processes. Specifically, on July 22, 2002, the IPCB granted Crownline Boats, Inc.'s ("Crownline") Petition for Adjusted Standard. Crownline operates a fiberglass boat manufacturing facility in West Frankfort, Illinois, using a gelcoat and resin application process very similar to that employed by Royal. Crownline was granted an exemption from compliance with the 8 lb/hr Rule because compliance with a MACT standard similar to the Composites MACT could be demonstrated. The adjusted standard proposed herein is based on the adjusted standard approved by the IPCB in response to Crownline's petition.

In its Recommendation filed August 20, 2009, Illinois EPA suggested adding the following condition to the language of the adjusted standard: "The relief granted in this proceeding shall be limited to the emission activities at Royal's Dix facility as of the date of this filing." Royal opposes the addition of such a provision. The language is vague and ambiguous as to what is meant by "emission activities at Royal's Dix facility as of the date of this filing." First, it is unclear what date is being referred to and whether it is the date that an order would be issued or some other date? Second, and more importantly, such a provision can be read to mean that only those activities taking place on the date in question are governed by the relief granted. If Royal is not conducting manufacturing activities on the date in question, does that mean that the relief granted in this proceeding does not apply to any of Royal's air emissions? In addition, such language was not included in the Adjusted Standard issued to Crownleine, discussed above. Because of the ambiguity of this proposed language and the precedent in the Crownline matter, Royal requests that it not be added to the language of any adjusted standard which may be issued in this proceeding.

Finally, both Royal and the Illinois EPA oppose any restrictions which would be placed on Royals' manufacturing operations as part of an adjusted standard in situations were there may be ozone action days. (See, Illinois EPA Response to Further Questions posed by the IPCB, filed Oct. 27, 2009, pgs. 3-4). This issue was raised in the IPCB's questions to Royal and the Illinois EPA. In the pleadings it filed with the IPCB and in the testimony it presented at the hearing, Royal detailed that such restrictions would be

logistically unworkable and would be an unreasonable burden to impose on a facility which often has 10 or fewer employees working. In addition, Illinois EPA stated: "[i]t would be inappropriate to require a single facility amongst a group of potentially contributing facilities to accept a condition limiting VOM emitting operations on ozone action days. . ."

IV. SUMMARY

In summary, Royal offers the following reasons as to why it should receive the adjusted standard requested in lieu of having to comply with the 8 lb/hr Rule on a strict hourly basis:

- Royal is already subject to National Emission Standard for Hazardous Air Pollutants for reinforced plastic composite manufacturing facilities, found at 40 CFR Part 63 Subpart WWWW. EPA estimates that the annual cost for a facility to comply with the MACT is $2,800/ton of hazardous air pollutants removed and will reduce styrene emissions by an average of 43%. Royal has been in continuous compliance with the MACT since it's implementation.

- Technical and regulatory constraints (such as the high air flow needed to ventilate building air in order to comply with OSHA worker health & safety standards) make the cost for Royal to comply with the 8 lb/hr Rule on a strict hourly basis using emission controls unreasonably high.

- The capital costs associated with tail-stack (end-of-pipe) controls for Royal to comply with the 8 lb/hr Rule on a strict hourly basis would cost approximately $709,500 to install and over $470,000 per year to operate. This equates to approximately $18,400 per ton of pollutant removed.

- Although some alternate methods for manufacturing fiberglass reinforced plastic products exist, none of them can be technically or economically applied to a swimming pool manufacturing operation such as Royal's and none of them will actually allow Royal to fully comply with the 8 lb/hr Rule on a strict hourly basis.

- The high cost of using either end-of-stack emission controls or very expensive alternative production methods (those requiring complete re-tooling and re-design of production methods and procedures), will put Royal at a significant competitive disadvantage. This will result in one of the following scenarios:

    - To remain competitive, Royal will be forced to move to another state which does not have an 8 lb/hr Rule (or any similar limitation); or
    - Royal will eventually be forced out of business because it will not be able to compete for customers due to the high cost of its swimming pools and/or due to the diminished quality/durability of its swimming pools.

- The 8 lb/hr Rule puts Royal at a competitive disadvantage to other swimming pool manufacturers located in states without a similar 8 lb/hr Rule. Royal and its

consultant, EECS, are familiar with swimming pool manufacturing facilities in at least seven other states (Tennessee, West Virginia, Florida, Arizona, South Carolina, New York and Louisiana, where Royal's only other manufacturing facility is located), and none of those states have an 8 lb/hr Rule. Royal and its consultant are not familiar with any other swimming pool manufacturing operations within Illinois.

V. CONCLUSION

The requested adjusted standard should be granted as an alternative to Royal's compliance with 35 IAC §215.301. Notwithstanding the technical impracticality of complying with the requirements of the 8 lb/hr Rule on a strict hourly basis, to require Royal to comply with the 8 lb/hr Rule would result in substantial economic hardship to Royal, and perhaps even closure of the Dix Plant.

WHEREFORE, Royal Fiberglass Pools, Inc. respectfully requests an adjusted standard from 35 IAC § 215.301 as set forth herein.

Respectfully Submitted,

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CERTIFICATE OF SERVICE

The undersigned certifies that a copy of the foregoing Post-Hearing Brief was served upon the following parties on the 7th day of December, 2009:

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