

Regulatory Analysis Form

(Completed by Promulgating Agency)

INDEPENDENT REGULATORY
REVIEW COMMISSION

(All Comments submitted on this regulation will appear on IRRC's website)

(1) Agency
Environmental Protection

(2) Agency Number:
Identification Number: 7-487

IRRC Number: 3066

(3) PA Code Cite: 25 Pa. Code Chapter 129

(4) Short Title: Control of VOC Emissions from Fiberglass Boat Manufacturing Materials

(5) Agency Contacts (List Telephone Number and Email Address):

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(6) Type of Rulemaking (check applicable box):

- Proposed Regulation
 Final Regulation
 Final Omitted Regulation

- Emergency Certification Regulation
 Certification by the Governor
 Certification by the Attorney General

(7) Briefly explain the regulation in clear and nontechnical language. (100 words or less)

The proposed rulemaking would amend Chapter 129 (relating to standards for sources) to add § 129.74 (relating to control of VOC emissions from fiberglass boat manufacturing materials) to adopt reasonably available control technology (RACT) requirements and RACT emission limitations for stationary sources of volatile organic compound (VOC) emissions from fiberglass boat manufacturing materials including open molding resin, gel coat and cleaning materials.

Emissions of VOCs are precursors to the formation of ground-level ozone, a criteria air pollutant. Ground-level ozone is formed from emissions of nitrogen oxides (NOx) and VOCs in the presence of sunlight. High concentrations of ground-level ozone air pollution are a serious threat to public health and welfare and the environment. The ground-level ozone air pollution reduction measures in this proposed rulemaking are reasonably necessary to attain and maintain the health- and welfare-based ozone National Ambient Air Quality Standards (NAAQS) in this Commonwealth and to satisfy related Clean Air Act (CAA) (42 U.S.C.A. §§ 7401—7671q) requirements.

This proposed rulemaking will be submitted to the United States Environmental Protection Agency (EPA) for approval as a revision to the Commonwealth's State Implementation Plan (SIP) following promulgation of the final-form regulation.

(8) State the statutory authority for the regulation. Include specific statutory citation.

The proposed rulemaking is authorized under section 5(a)(1) of the Air Pollution Control Act (APCA) (35 P.S. § 4005(a)(1)), which grants the Environmental Quality Board (Board) the authority to adopt rules and regulations for the prevention, control, reduction and abatement of air pollution in this Commonwealth.

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Section 5(a)(8) of the APCA (35 P.S. § 4005(a)(8)) also grants the Board the authority to adopt rules and regulations designed to implement the provisions of the CAA.

(9) Is the regulation mandated by any federal or state law or court order, or federal regulation? Are there any relevant state or federal court decisions? If yes, cite the specific law, case or regulation as well as any deadlines for action.

Yes. State regulations to control VOC emissions from fiberglass boat manufacturing materials are required under Federal law and will be reviewed and approved by the EPA if the provisions meet the RACT requirements of the CAA and its implementing regulations. The EPA defines RACT as "the lowest emission limitation that a particular source is capable of meeting by the application of control technology that is reasonably available considering technological and economic feasibility." See *State Implementation Plans; General Preamble for Proposed Rulemaking on Approval of Plan Revisions for Nonattainment Areas—Supplement (on Control Techniques Guidelines)*, 44 FR 53761 (September 17, 1979).

In accordance with sections 172(c)(1), 182(b)(2)(A) and 184(b)(1)(B) of the CAA (42 U.S.C.A. §§ 7502(c)(1), 7511a(b)(2)(A) and 7511c(b)(1)(B)), the proposed rulemaking establishes the VOC emission limitations and other requirements of the EPA 2008 Fiberglass Boat Manufacturing Materials Control Techniques Guidelines (CTG) as RACT for these sources in this Commonwealth. See *Consumer and Commercial Products, Group IV: Control Techniques Guidelines in Lieu of Regulations for Miscellaneous Metal Products Coatings, Plastic Parts Coatings, Auto and Light-Duty Truck Assembly Coatings, Fiberglass Boat Manufacturing Materials, and Miscellaneous Industrial Adhesives*, 73 FR 58481, 58483 (October 7, 2008).

Section 109(b) of the CAA (42 U.S.C.A. § 7409(b)) provides that the Administrator of the EPA must establish NAAQS for criteria air pollutants at levels that protect public health and welfare and the environment. The criteria air pollutants are commonly found throughout the United States and currently include six air pollutants: ground-level ozone, particle pollution (often referred to as particulate matter), carbon monoxide, sulfur oxides, NO_x, and lead. These air pollutants, when present in sufficient concentration in the ambient air, can cause harm to public health and welfare and to the environment.

The EPA calls these pollutants "criteria" air pollutants because it regulates them by developing human health-based or environmentally-based, or both, criteria (science-based guidelines) for setting permissible ambient air levels. The set of limits based on human health is called primary standards. Another set of limits intended to prevent environmental and property damage is called secondary standards. Of the six criteria air pollutants, high concentrations of ground-level ozone and particle pollution are the most widespread health and welfare threats. The EPA set the ground-level ozone NAAQS in July 1997 at 0.08 part per million (ppm) averaged over 8 hours and lowered it in March 2008 to 0.075 ppm. See 62 FR 38855 (July 18, 1997) and 73 FR 16436 (March 27, 2008).

Section 110(a) of the CAA (42 U.S.C.A. § 7410(a)) provides that each state shall adopt and submit to the EPA a plan to implement measures [State Implementation Plan or "SIP"] to enforce the NAAQS or revision to the NAAQS promulgated under section 109(b) of the CAA. Section 172(c)(1) of the CAA provides that SIPs for nonattainment areas must include "reasonably available control measures," including "reasonably available control technology" or "RACT," for sources of emissions of NO_x and VOC. Section 182(b)(2) of the CAA (42 U.S.C.A. § 7511a(b)(2)) provides that for moderate ozone nonattainment areas, states must revise their SIPs to include RACT for sources of VOC emissions covered by a Control Techniques Guidelines (CTG) document issued by the EPA prior to the area's date of attainment. CTG documents provide information about a source category and recommendations of what the EPA considers to be RACT

for the source category.

Section 183(e) of the CAA (42 U.S.C.A. § 7511b(e)) directs the EPA to list for regulation those categories of products that account for at least 80% of the VOC emissions from consumer and commercial products in ozone nonattainment areas. Section 183(e)(3)(C) of the CAA (42 U.S.C.A. § 7511b(e)(3)(C)) further provides that the EPA may issue a CTG document in place of a National regulation for a product category where the EPA determines that the CTG will be “substantially as effective as regulations” in reducing emissions of VOC in ozone nonattainment areas. The CTG provides states with the EPA’s recommendation of what constitutes RACT for the covered category. States can use the Federal recommendations provided in the CTG to inform their own determination as to what constitutes RACT for VOC emissions from the covered category. State air pollution control agencies may implement other technically-sound approaches that are consistent with the CAA requirements and the EPA’s implementing regulations or guidelines.

In 1995, the EPA listed fiberglass boat manufacturing materials on its section 183(e) list and, in 2008, the EPA issued a CTG for this product category. See 60 FR 15264, 15267 (March 23, 1995) and 73 FR 58481; *Control Techniques Guidelines for Fiberglass Boat Manufacturing Materials*, EPA 453/R-08-004, Office of Air Quality Planning and Standards, EPA, September 2008. The Fiberglass Boat Manufacturing Materials CTG is available on the EPA website at: www.epa.gov/airquality/ozonepollution/SIPToolkit/ctgs.html.

Section 184(a) of the CAA (42 U.S.C.A. § 7511c(a)) provides that the entire Commonwealth is included in the Ozone Transport Region (OTR) established under section 184 (www.otcair.org). Section 184(b) of the CAA (42 U.S.C.A. § 7511c(b)) addresses provisions for the SIP of a state included in the OTR. Section 184(b)(1)(B) of the CAA requires that states in the OTR, including Pennsylvania, submit a SIP revision requiring implementation of RACT for all sources of VOC emissions in the state covered by a specific CTG and not just for those sources that are located in designated nonattainment areas of the state. Consequently, the Commonwealth’s SIP must include regulations applicable statewide to control VOC emissions from fiberglass boat manufacturing materials, which are covered by a CTG issued under the following notice: *Consumer and Commercial Products, Group IV: Control Techniques Guidelines in Lieu of Regulations for Miscellaneous Metal Products Coatings, Plastic Parts Coatings, Auto and Light-Duty Truck Assembly Coatings, Fiberglass Boat Manufacturing Materials, and Miscellaneous Industrial Adhesives*, 73 FR 58481, 58483. In the 2008 notice of final determination and availability of final Control Techniques Guidelines, the EPA determined that the recommendations of the Fiberglass Boat Manufacturing Materials CTG would be substantially as effective as National regulations in reducing VOC emissions from the fiberglass boat manufacturing materials product category in ozone nonattainment areas. See 73 FR 58481.

The Department reviewed the recommendations included in the 2008 Fiberglass Boat Manufacturing Materials CTG for their applicability to the ground-level ozone reduction measures necessary for this Commonwealth. The Bureau of Air Quality has determined that the measures provided in the Fiberglass Boat Manufacturing Materials CTG are appropriate to be implemented in this Commonwealth as RACT for this category.

Section 182(b)(2) of the CAA (42 U.S.C.A. § 7511a(b)(2)) requires that a CTG issued by the EPA after November 15, 1990, include the date by which states subject to section 182(b) must submit SIP revisions in response to the CTG. The EPA issued the Fiberglass Boat Manufacturing Materials CTG on October 7, 2008. See 73 FR 58481. The EPA provided a 1-year period for the required SIP submittal, making SIP revisions for implementation of the Fiberglass Boat Manufacturing Materials CTG recommendations due

by October 7, 2009. See 73 FR 58481, 58484.

If the EPA Administrator finds that a state has failed to submit an acceptable implementation plan or has failed to implement the requirements of an approved plan, sanctions will be imposed, though sanctions cannot be imposed until 18 months after the Administrator makes the determination, and sanctions cannot be imposed if a deficiency has been corrected within the 18-month period. The EPA has not yet made such a finding for this rulemaking.

Section 179 of the CAA (42 U.S.C.A. § 7509) authorizes the EPA to use two types of sanctions:

1) imposing what are called “2:1 offsets” on new or modified sources of emissions; and 2) withholding of certain Federal highway funds. Under section 179 and its implementing regulations, the Administrator first imposes offsets, and then, if the deficiency has not been corrected within 6 months, also applies highway funding sanctions. See 40 CFR 52.31 (relating to selection of sequence of mandatory sanctions for findings made pursuant to section 179 of the Clean Air Act). The Commonwealth receives approximately \$1.6 billion in Federal transportation funding annually, which would be at risk if the Commonwealth does not implement RACT requirements for the control of VOC emissions from fiberglass boat manufacturing materials.

In 2004, the EPA designated 37 counties in this Commonwealth as 8-hour ozone nonattainment areas for the 1997 8-hour ozone NAAQS. Based on preliminary data for the 2013 ozone season, all monitored areas of the Commonwealth are attaining the 1997 8-hour ozone NAAQS. The Department must ensure that the 1997 ozone standard is attained and maintained by implementing permanent and enforceable control measures to ensure violations of the standard do not occur for the next decade.

In April 2012, the EPA designated five areas in Pennsylvania as nonattainment for the 2008 ozone NAAQS. See 77 FR 30088, 30143 (May 21, 2012). These areas include all or a portion of the following counties: Allegheny, Armstrong, Berks, Beaver, Bucks, Butler, Carbon, Chester, Delaware, Fayette, Lancaster, Lehigh, Montgomery, Northampton, Philadelphia, Washington and Westmoreland. The Commonwealth must ensure that these areas attain the 2008 ozone standard by 2015 and that they continue to maintain the standard thereafter.

(10) State why the regulation is needed. Explain the compelling public interest that justifies the regulation. Describe who will benefit from the regulation. Quantify the benefits as completely as possible and approximate the number of people who will benefit.

The purpose of this proposed rulemaking is to implement control measures to reduce VOC emissions from fiberglass boat manufacturing materials including open molding resin, gel coat and cleaning materials. VOCs are precursors for ground-level ozone formation. Ground-level ozone, a public health and welfare hazard, is not emitted directly by fiberglass boat manufacturing materials to the atmosphere, but is formed by a photochemical reaction between VOCs and NO_x in the presence of sunlight.

The EPA regulates ground-level ozone as a criteria air pollutant because of its widespread adverse health and environmental effects. Exposure to high concentrations of ground-level ozone is a serious human and animal health and welfare threat, causing respiratory illnesses and decreased lung function, agricultural crop loss, visible foliar injury to sensitive plant species, and damage to forests, ecosystems and infrastructure. Implementation of the proposed VOC control measures for fiberglass boat manufacturing materials would benefit the health and welfare of the approximately 12 million residents and the numerous animals, crops, vegetation and natural areas of this Commonwealth by reducing emissions of VOCs and the subsequent formation of ground-level ozone air pollution. Ground-level ozone air pollution can also be

transported downwind via regional air currents and meteorological events. Reductions of ground-level ozone in this Commonwealth will therefore also benefit the residents of downwind states and downwind environments. The measures in the proposed rulemaking are reasonably necessary to attain and maintain the health-and welfare-based 8-hour ozone NAAQS in this Commonwealth, to satisfy related CAA requirements, and to protect the livelihoods of numerous citizens and residents.

Exposure to high levels of ground-level ozone air pollution correlates to increased respiratory disease and higher mortality rates. Ozone can inflame and damage the lining of the lungs. Within a few days, the damaged cells are shed and replaced. Over a long time period, lung tissue may become permanently scarred, resulting in permanent loss of lung function and a lower quality of life. When ambient ozone levels are high, more people with asthma have attacks that require a doctor's attention or use of medication. Ozone also makes people more sensitive to allergens including pet dander, pollen and dust mites, all of which can trigger asthma attacks. The EPA has concluded that there is an association between high levels of ambient ozone and increased hospital admissions for respiratory ailments including asthma. While children, the elderly and those with respiratory problems are most at risk, even healthy individuals may experience increased respiratory ailments and other symptoms when they are exposed to high levels of ambient ozone while engaged in activities that involve physical exertion. High levels of ground-level ozone also affect animals including pets, livestock, and wildlife, in ways similar to humans.

The EPA has estimated the monetized health benefits of attaining the NAAQS. For example, the EPA estimated that the monetized health benefits of attaining the 8-hour ozone standard of 0.075 ppm range from \$8.3 billion to \$18 billion on a National basis. See *Regulatory Impact Analysis, Final National Ambient Air Quality Standard for Ozone*, July 2011, http://epa.gov/glo/pdfs/201107_OMBdraft-OzoneRIA.pdf. Prorating that benefit to the Commonwealth, based on population, results in a public health benefit of \$337 million to \$732 million. The Department is not stating that these estimated monetized health benefits would all be the result of implementing the proposed rulemaking RACT measures, but the EPA estimates are indicative of the benefits to Commonwealth residents of attaining the 8-hour ozone NAAQS.

In addition to causing adverse human and animal health effects, the EPA has concluded that ground-level ozone affects vegetation and ecosystems, leading to reductions in agricultural crop and commercial forest yields by destroying chlorophyll; reduced growth and survivability of tree seedlings; and increased plant susceptibility to disease, pests, and other environmental stresses, including harsh weather. In long-lived species, these effects may become evident only after several years or even decades and have the potential for long-term adverse impacts on forest ecosystems. Ozone damage to the foliage of trees and other plants can decrease the aesthetic value of ornamental species used in residential landscaping, as well as the natural beauty of parks and recreation areas. Through deposition, ground-level ozone also contributes to pollution in the Chesapeake Bay. These effects can have adverse impacts including loss of species diversity and changes to habitat quality and water and nutrient cycles. High levels of ground-level ozone can also cause damage to buildings and synthetic fibers, including nylon, and reduced visibility on roadways and in natural areas.

The economic value of some welfare losses due to high concentrations of ground-level ozone can be calculated, such as crop yield loss from both reduced seed production and visible injury to some leaf crops, including lettuce, spinach and tobacco, as well as visible injury to ornamental plants, including grass, flowers and shrubs. Other types of welfare loss may not be quantifiable, such as the reduced aesthetic value of trees growing in heavily visited parks.

Pennsylvania's 63,000 farm families are the stewards of more than 7.7 million acres of farmland. With \$5.7

billion in cash receipts annually from production agriculture, Pennsylvania farmers and agribusinesses are the leading economic driver in our state. In addition to production agriculture, the industry also raises revenue and supplies jobs through support services such as food processing, marketing, transportation, and farm equipment. In total, production agriculture and agribusiness contributes nearly \$57 billion to Pennsylvania's economy. (Source: Pennsylvania Department of Agriculture.) These families, farms, and related businesses benefit directly from the reduction of ground-level ozone air pollution concentrations.

The Pennsylvania Department of Conservation and Natural Resources (DCNR) is the steward of the state-owned forests and parks. DCNR awards millions of dollars in construction contracts each year to build and maintain the facilities in its parks and forests. Timber sales on state forest lands contribute to the \$5 billion a year timber industry. Hundreds of concessions throughout the park system help complete the park experience for both state and out-of-state visitors. (Source: Pennsylvania Department of Conservation and Natural Resources.)

Further, Pennsylvania leads the nation in growing volume of hardwood species, with 17 million acres in forest land. As the leading producer of hardwood lumber in the United States, Pennsylvania also leads in the export of hardwood lumber, exporting nearly \$800 million annually in lumber, logs, furniture and paper products to more than 70 countries around the world. Recent U.S. Forest Service data shows that the state's forest growth-to-harvest rate is better than 2 to 1. This vast renewable resource puts the hardwoods industry at the forefront of manufacturing in the Commonwealth. Through 2006, the total annual direct economic impact generated by Pennsylvania's wood industry was \$18.4 billion. The industry employed 128,000 people, with \$4.7 billion in wages and salaries earned. Production was 1.1 billion board feet of lumber annually. (Strauss, Lord, Powell; PSU, June 2007). (Source: Pennsylvania Hardwoods Development Council Biennial Report, 2009-2010.

http://www.agriculture.state.pa.us/portal/server.pt/gateway/PTARGS_0_2_24476_10297_0_43/AgWebsite/Files/Publications/Hardwoods%20Biennial%20Report%202010.pdf

(Source: Pennsylvania Hardwoods Development Council Photo, *Pennsylvania Hardwood Leading the Nation*.

http://www.agriculture.state.pa.us/portal/server.pt/gateway/PTARGS_0_2_24476_10297_0_43/AgWebsite/Files/Publications/8631_panel11_Leading_the_Nation_100ppi.jpg

(11) Are there any provisions that are more stringent than federal standards? If yes, identify the specific provisions and the compelling Pennsylvania interest that demands stronger regulations.

There are not Federal statutory or regulatory limits for VOC emissions from fiberglass boat manufacturing materials. In 2001, however, the EPA promulgated the National Emission Standards for Hazardous Air Pollutants for Boat Manufacturing, 40 CFR part 63, subpart VVVV (relating to National emission standards for hazardous air pollutants for boat manufacturing) (2001 NESHAP), set forth at 40 CFR 63.5680—63.5779. The 2001 NESHAP established organic hazardous air pollutant (HAP) emissions limits based on low-HAP-content resins and gel coats and low-volatile-emitting (non-atomizing) resin application technology. Many HAPs are VOCs, but not all VOCs are HAPs. The 2001 NESHAP data, however, indicate that styrene and methyl methacrylate, which are both organic HAP and VOC, account for nearly all the VOC emissions, as well as HAP emissions, from fiberglass boat manufacturing facilities. Therefore, total HAP and VOC emissions from fiberglass boat manufacturing facilities are nearly equal.

When developing the VOC emission reduction RACT measures included in its Fiberglass Boat Manufacturing Materials CTG, the EPA took into account the HAP emission reduction measures of the 2001 NESHAP for the boat manufacturing industry. The requirements of the 2001 NESHAP apply to

"major sources" of HAP from boat manufacturing operations. For the purpose of regulating HAP, a "major source" is considered to be a stationary source or group of stationary sources located within a contiguous area and under common control that emits or has the potential to emit considering controls, in the aggregate, 10 tons per year (tpy) of any single listed HAP or 25 tpy of any combination of HAPs. See section 112(a)(1) of the CAA (42 U.S.C.A. § 7412(a)(1)); see also 61 FR 27133 (May 30, 1996). The Federal recommendations for control of VOC emissions included in the Fiberglass Boat Manufacturing Materials CTG are based on the HAP content and emission rate limits for open molding resin, gel coat and cleaning materials and other requirements set forth in the 2001 NESHAP for boat manufacturing.

This proposed rulemaking is designed to adopt the standards and recommendations in the 2008 Fiberglass Boat Manufacturing Materials CTG to meet the requirements of CAA sections 172(c)(1), 182(b)(2) and 184(b)(1)(B). The proposed rulemaking would apply the standards and recommendations of the CTG across this entire Commonwealth, as required by CAA section 184(b)(1)(B). The VOC content and emission rate limitations and other requirements of the proposed rulemaking would not be more stringent than Federal standards.

(12) How does this regulation compare with those of the other states? How will this affect Pennsylvania's ability to compete with other states?

This proposed rulemaking is similar to the regulations already adopted by Maine and New Hampshire, both of which are members of the OTR as is Pennsylvania (www.otcair.org). This proposed rulemaking is also similar in many respects to the regulation adopted by Ohio, which is not a member of the OTR. The proposed rulemaking would have no effect on Pennsylvania's ability to compete with other states that have fiberglass boat manufacturing operations.

(13) Will the regulation affect any other regulations of the promulgating agency or other state agencies? If yes, explain and provide specific citations.

No other regulations promulgated by this agency or other state agencies would be affected.

(14) Describe the communications with and solicitation of input from the public, any advisory council/group, small businesses and groups representing small businesses in the development and drafting of the regulation. List the specific persons and/or groups who were involved. ("Small business" is defined in Section 3 of the Regulatory Review Act, Act 76 of 2012.)

The proposed rulemaking was discussed with the Air Quality Technical Advisory Committee (AQTAC) on December 12, 2013. The AQTAC voted unanimously to concur with the Department's recommendation to forward the proposed rulemaking to the Board for consideration. The proposed rulemaking was discussed with the Small Business Compliance Advisory Committee (SBCAC) on April 23, 2014. The SBCAC also voted unanimously to concur with the Department's recommendation to forward the proposed rulemaking to the Board for consideration. The proposed rulemaking was discussed with the Citizens Advisory Council (CAC) Policy and Regulatory Oversight (PRO) Committee on March 12, 2014. On the recommendation of the PRO Committee of the CAC, on March 18, 2014, the CAC concurred with the Department's recommendation to forward the proposed rulemaking to the Board. The AQTAC, SBCAC and CAC meetings are advertised and open to the public.

(15) Identify the types and number of persons, businesses, small businesses (as defined in Section 3 of the Regulatory Review Act, Act 76 of 2012) and organizations which will be affected by the regulation. How are they affected?

This proposed rulemaking would apply, at a minimum, to the owner and operator of one known Title V facility in this Commonwealth. The facility, VEC Technology, LLC, located at 639 Keystone Rd, Greenville PA 16125, is a major source of HAP regulated under the 2001 NESHAP. (Please see response to question (11) for discussion of major sources of HAPs.) The Department anticipates that the affected owner of the facility would demonstrate compliance with the proposed measures to reduce VOC emissions because this facility is already subject to the 2001 NESHAP HAP emission control requirements. These NESHAP provisions are applicable requirements in the Federally-enforceable Title V permit issued by the Department to the owner and operator on January 23, 2008. Therefore, there would be no additional compliance costs to the owner and operator of this source from implementation of this proposed rulemaking. A review of the U.S. Small Business Administration's (SBA) Small Business Size Regulations under 13 CFR Chapter 1, Part 121 (relating to Small Business Size Regulations) indicates that VEC Technology, LLC, is a small business.

It is possible that the proposed rulemaking would also apply to owners and operators of other fiberglass boat manufacturing facilities that have not yet been identified, because the HAP emission reduction measures of the 2001 NESHAP do not apply to the owners and operators of area sources (that is, sources that emit less than 10 tpy of any single listed HAP or less than 25 tpy of any combination of HAPs). Owners and operators of lower-HAP-emitting area source fiberglass boat manufacturing facilities are, therefore, not currently required to implement the HAP emission reduction measures provided in the 2001 NESHAP and would not have been issued a Title V permit by the Department incorporating these measures as applicable requirements. The VOC emission reduction measures included in the 2008 Fiberglass Boat Manufacturing Materials CTG are based on the 2001 NESHAP HAP emission reduction measures. While a fiberglass boat manufacturing facility area source of HAP may not meet the threshold for implementing the HAP emission reduction measures of the 2001 NESHAP, the facility may meet the proposed applicability threshold limits for implementing the proposed rulemaking measures to control VOC emissions. If the proposed rulemaking would apply to the owners and operators of other fiberglass boat manufacturing facilities that have not yet been identified, they would likely also be small businesses.

The Department's assessment of how many owners and operators of facilities would be subject to the proposed rulemaking resulted from reviewing the Department's air quality permits databases and the U.S. SBA Small Business Size Regulations under 13 CFR Chapter 1, Part 121, as well as information obtained from the Pennsylvania Small Business Development Center's Environmental Management Assistance Program (EMAP). A search of the Department's "Environmental Facility Application Compliance Tracking System" (eFACTS) database and Air Information Management System (AIMS) database revealed the owner and operator of one facility in this Commonwealth as having a permit issued by the Department that includes provisions for control of HAP emissions from fiberglass boat manufacturing processes. However, eFACTS and AIMS do not provide an exhaustive list of all owners or operators of fiberglass boat manufacturing facilities in this Commonwealth, but only those with which the Department has had contact and for which the Department has a reason to input data; these are usually the largest emitters. The Federal Small Business Size Regulations specify that a company with the "boat building" North American Industry Classification System (NAICS) code is considered to be a "small business" if it has 500 or fewer employees. Department staff contacted the owner or operator of all businesses that appeared on a list of small Pennsylvania businesses generated under the "boat building" NAICS code obtained from the Pennsylvania Small Business Development Center EMAP. The owners or operators of these businesses had identified themselves as being connected with boat manufacturing, but none of them made the types of components covered by the proposed rulemaking.

The owner and operator of a facility that would be subject to the proposed rulemaking would likely incur

little, if any, cost to implement the requirements of the proposed rulemaking. The proposed rulemaking provides as one compliance option the use of individually-compliant open molding resin and gel coat materials in subsection (f)(1), and requires the use of compliant cleaning solvents in subsection (l). Open molding resin, gel coat and cleaning materials that are compliant with the HAP content limits and HAP emission rate limits set forth in the 2001 NESHAP and with the proposed rulemaking VOC content limits and VOC emission rate limits set forth in the tables under subsections (a) and (f) are readily available to the owners and operators of all sizes of facilities. The VOC content limits and VOC emission rate limits for individually-compliant production resins and tooling resins also depend on the application method used to apply the resin. Production and tooling resins may be applied using either atomizing or non-atomizing methods. Non-atomizing resin application methods reduce the amount and rate of emissions of VOC from the resins compared to application with an atomizing method, thereby enabling use of higher VOC-content resins. Non-atomizing application technologies include bucket and brush application, pressure fed resin rollers, flow converters, fabric impregnators, and fluid impingement technology. A production or tooling resin can contain a higher amount of VOC but still emit less VOC during application if a non-atomizing technology is used rather than an atomizing technology. The industry has experienced a shift to non-atomizing resin application methods that are required to comply with the 2001 NESHAP HAP emission reduction requirements and which are included in the proposed rulemaking. This shift has occurred at all sizes of facilities across the U.S. because of the productivity and economic benefits of using non-atomizing methods over conventional atomizing methods.

As a second option, the proposed rulemaking would provide flexibility by allowing compliance through averaging the VOC emission rates of open molding resin and gel coat materials in subsection (f)(2) in addition to choice of application technology. A third compliance option, the use of a VOC emissions capture system and add-on air pollution control device, is provided in subsection (f)(3). However, because of the wide availability and lower cost (compared to add-on controls) of compliant VOC content materials and alternative application methods, compliant materials and select application methods are generally used to reduce VOC emissions from fiberglass boat manufacturing facilities.

Emission limitations established by this proposed rulemaking would not require the submission of applications for amendments to existing operating permits. These requirements would be incorporated as applicable requirements at the time of permit renewal, if less than 3 years remain in the permit term.

New legal, accounting or consulting procedures would not be required.

(16) List the persons, groups or entities, including small businesses, which will be required to comply with the regulation. Approximate the number that will be required to comply.

This proposed rulemaking would apply to the owner and operator of one known Title V facility in this Commonwealth. The facility is VEC Technology, LLC, located at 639 Keystone Rd, Greenville PA 16125. A review of the Federal Small Business Size Regulations under 13 CFR Chapter 1, Part 121 indicates that VEC Technology, LLC, is a small business.

It is possible that the proposed rulemaking would also apply to owners and operators of other fiberglass boat manufacturing facilities that have not yet been identified. Please see response to question (15) for further explanation.

(17) Identify the financial, economic and social impact of the regulation on individuals, small businesses, businesses and labor communities and other public and private organizations. Evaluate the benefits expected as a result of the regulation.

This proposed rulemaking would apply to the owner and operator of one known Title V facility in this Commonwealth, which is a major source of HAP regulated under the 2001 NESHAP. The facility is VEC Technology, LLC, located at 639 Keystone Rd, Greenville PA 16125. The Department anticipates that the affected owner of the facility would demonstrate compliance with the proposed measures to reduce VOC emissions because this facility is already subject to the 2001 NESHAP HAP emission control requirements. These applicable requirements are incorporated in the Federally-enforceable Title V permit issued by the Department to the owner and operator on January 23, 2008. The VOC emission reduction measures included in the 2008 Fiberglass Boat Manufacturing Materials CTG are based on the 2001 NESHAP HAP emission reduction measures. Therefore, the Department does not anticipate that there would be additional compliance costs to the owner and operator of this source from implementation of the VOC emission reduction measures of this proposed rulemaking. A review of the Federal Small Business Size Regulations under 13 CFR Chapter 1, Part 121, indicates that VEC Technology, LLC, is a small business.

It is possible that the proposed rulemaking would also apply to the owners and operators of other fiberglass boat manufacturing facilities that have not yet been identified because they are not subject to the HAP emission reduction measures of the 2001 NESHAP and would not have been issued a Title V permit by the Department incorporating these measures as applicable requirements. If the proposed rulemaking would apply to the owners and operators of other fiberglass boat manufacturing facilities that have not yet been identified, they would likely also be small businesses.

The owner and operator of a facility that would be subject to the proposed rulemaking, regardless of whether the facility is or is not subject to the 2001 NESHAP, would likely incur little, if any, cost to implement the requirements of the proposed rulemaking. The proposed rulemaking provides as one compliance option the use of individually-compliant open molding resin and gel coat materials and the use of compliant cleaning solvents. Open molding resin, gel coat and cleaning materials that are compliant with the 2001 NESHAP HAP content and emission rate limits and with the proposed rulemaking VOC content and emission rate limits are readily available to the owners and operators of all sizes of facilities. The proposed rulemaking would also provide flexibility in compliance through the option of VOC emissions averaging of open molding resin and gel coat materials or the use of a VOC emissions capture system and add-on air pollution control device. Because of the wide availability and lower cost (compared to add-on controls) of compliant VOC content materials and alternative application methods, compliant materials and select application methods are generally used to reduce VOC emissions from fiberglass boat manufacturing facilities. Please see response to question (15) for further description of the compliance options.

This proposed rulemaking would help ensure that the owners and operators of regulated facilities, farms and agricultural enterprises, hardwoods and timber industries and tourism-related businesses, and residents of labor communities, citizens and the environment of this Commonwealth experience the benefits of improved ground-level ozone air quality and groundwater quality through reduced emissions of VOCs and HAPs from fiberglass boat manufacturing materials, including open molding resin, gel coat and cleaning materials. Although the proposed rulemaking is designed primarily to address ground-level ozone air quality, the reformulation or substitution of low-VOC content open molding resin and gel coat materials, and low-VOC content or low vapor pressure cleaning materials, to meet the VOC content and emission rate limits applicable to users may also result in reduction of HAP emissions, which are also a serious health threat. The reduced levels of high VOC- and HAP-content solvents would benefit groundwater quality through reduced loading on water treatment plants and in reduced quantities of high VOC- and HAP-content solvents leaching into the ground and streams and rivers.

The proposed rulemaking may create economic opportunities for VOC emission control technology innovators, manufacturers, and distributors through an increased demand for new or improved equipment. In addition, the owners and operators of regulated facilities that choose to comply by using a VOC emissions capture system and add-on air pollution control device may be required to install and operate an emissions monitoring system or equipment necessary for an emissions monitoring method in order to comply with the rulemaking, thereby creating an economic opportunity for the emissions monitoring industry.

(18) Explain how the benefits of the regulation outweigh any cost and adverse effects.

Ground-level ozone is a highly reactive gas, which at sufficiently high concentrations can produce a wide variety of harmful effects. At elevated concentrations, ground-level ozone can adversely affect human health, animal health, vegetation, materials, economic values and personal comfort and well-being. It can cause damage to important food crops, forests, livestock and wildlife.

Repeated exposure to ground-level ozone air pollution may cause a variety of adverse health effects for both healthy people and those with existing conditions, including difficulty in breathing, chest pains, coughing, nausea, throat irritation, and congestion. It can worsen bronchitis, heart disease, emphysema and asthma and reduce lung capacity. Asthma is a significant and growing threat to children and adults. High levels of ground-level ozone affect animals in ways similar to humans. In addition to causing adverse human and animal health effects, the EPA has concluded that high concentrations of ground-level ozone affects vegetation and ecosystems, leading to reductions in agricultural crop and commercial forest yields by destroying chlorophyll; reduced growth and survivability of tree seedlings; and increased plant susceptibility to disease, pests, and other environmental stresses, including harsh weather. In long-lived species, these effects may become evident only after several years or even decades and have the potential for long-term adverse impacts on forest ecosystems. Ozone damage to the foliage of trees and other plants can decrease the aesthetic value of ornamental species used in residential landscaping, as well as the natural beauty of parks and recreation areas. Through deposition, ground-level ozone also contributes to pollution in the Chesapeake Bay. These effects can have adverse impacts including loss of species diversity and changes to habitat quality and water and nutrient cycles. High levels of ground-level ozone can also cause damage to buildings and synthetic fibers, including nylon, and reduced visibility on roadways and in natural areas.

The economic value of some welfare losses due to ozone can be calculated, such as crop yield loss from both reduced seed production and visible injury to some leaf crops, including lettuce, spinach and tobacco, as well as visible injury to ornamental plants, including grass, flowers and shrubs. Other types of welfare loss may not be quantifiable, such as the reduced aesthetic value of trees growing in heavily visited parks.

The EPA has estimated the monetized health benefits of attaining the NAAQS. For example, the EPA estimated that the monetized health benefits of attaining the 8-hour ozone standard of 0.075 ppm range from \$8.3 billion to \$18 billion on a National basis. See *Regulatory Impact Analysis, Final National Ambient Air Quality Standard for Ozone*, July 2011, http://epa.gov/glo/pdfs/201107_OMBdraft-OzoneRIA.pdf. Prorating that benefit to the Commonwealth, based on population, results in a public health benefit of \$337 million to \$732 million. The Department is not stating that these estimated monetized health benefits would all be the result of implementing the proposed rulemaking RACT measures, but the EPA estimates are indicative of the benefits to Commonwealth residents and the owners and operators of businesses and industries of attaining the NAAQS.

The owner and operator of a facility that would be subject to the proposed rulemaking would likely incur

little, if any, cost to implement the requirements of the proposed rulemaking. Open molding resin, gel coat and cleaning materials that are compliant with the 2001 NESHAP HAP content and emission rate limits and with the proposed rulemaking VOC content and emission rate limits are readily available to the owners and operators of all sizes of facilities. The VOC content and emission rate limits for production resins and tooling resins also depend on the application method used to apply the resin. Production and tooling resins may be applied using either atomizing or non-atomizing methods. Non-atomizing resin application methods reduce the emissions of VOC from the resins compared to application with an atomizing method, thereby enabling use of higher VOC-content resins. A production or tooling resin can contain a higher amount of VOC but still emit less VOC during application if a non-atomizing technology is used rather than an atomizing technology. The industry has experienced a shift to non-atomizing resin application methods that are required to comply with the 2001 NESHAP HAP emission reduction measures. This shift has occurred at all sizes of facilities across the U.S. because of the productivity and economic benefits of using non-atomizing methods over conventional atomizing methods. While this is not a direct benefit of this proposed rulemaking, it shows a beneficial correlative downward trend in VOC emissions from fiberglass boat manufacturers.

As discussed in the response to question (10), the monetized health benefits to Commonwealth residents and the economic benefits to the Commonwealth's agricultural, hardwoods and tourism industries as a result of attaining and maintaining the ground-level ozone NAAQS through reduced emissions of ozone precursors from fiberglass boat manufacturing materials far outweigh the negligible costs that would be incurred by the regulated industry.

(19) Provide a specific estimate of the costs and/or savings to the **regulated community** associated with compliance, including any legal, accounting or consulting procedures which may be required. Explain how the dollar estimates were derived.

This proposed rulemaking would apply to the owner and operator of one known Title V facility in this Commonwealth that is a major source of HAP regulated under the 2001 NESHAP. The facility is VEC Technology, LLC, located at 639 Keystone Rd, Greenville PA 16125. The Department anticipates that the affected owner of the facility would demonstrate compliance with the proposed measures to reduce VOC emissions because this facility is already subject to the 2001 NESHAP HAP emission control requirements, including recordkeeping requirements. These NESHAP provisions are applicable requirements in the Federally-enforceable Title V permit issued by the Department to the owner and operator on January 23, 2008. The VOC emission reduction measures included in the 2008 Fiberglass Boat Manufacturing Materials CTG are based on the 2001 NESHAP HAP emission reduction measures. Therefore, the Department anticipates that there would be no additional compliance costs to the owner and operator of this facility from implementation of this proposed rulemaking.

As discussed in response to question (15), above, it is possible that the proposed rulemaking would also apply to the owners and operators of other fiberglass boat manufacturing facilities that have not yet been identified.

The owner and operator of any facility subject to the proposed rulemaking would likely incur little, if any, cost to implement the requirements of the proposed rulemaking. Open molding resin, gel coat and cleaning materials that are compliant with the 2001 NESHAP HAP content and emission rate limits and with the proposed rulemaking VOC content and emission rate limits are readily available to the owners and operators of all sizes of facilities. The VOC content and emission rate limits for production resins and tooling resins also depend on the application method used to apply the resin. Production and tooling resins may be applied using either atomizing or non-atomizing methods. Non-atomizing resin application

methods reduce the emissions of VOC from the resins compared to application with an atomizing method, thereby enabling use of higher VOC-content resins. A production or tooling resin can contain a higher amount of VOC but still emit less VOC during application if a non-atomizing technology is used rather than an atomizing technology. The industry has experienced a shift to non-atomizing resin application methods that are required to comply with the 2001 NESHAP HAP emission reduction measures. This shift has occurred at all sizes of facilities across the U.S. because of the productivity and economic benefits of using non-atomizing methods over conventional atomizing methods.

If an owner or operator of a facility were to elect to comply by installing and operating a VOC emissions capture system and add-on air pollution control device, which is a compliance option in the proposed rulemaking, the owner or operator would experience costs. But it is unlikely that an owner or operator would choose this option, given the wide availability and lower cost of compliant VOC content materials and alternative application methods.

New legal, accounting or consulting procedures would not be required.

(20) Provide a specific estimate of the costs and/or savings to **local governments** associated with compliance, including any legal, accounting or consulting procedures which may be required. Explain how the dollar estimates were derived.

No fiberglass boat manufacturing facilities have been identified as being owned by local governments. The Department estimates that there would be no costs or savings to local governments associated with compliance with the proposed regulation.

(21) Provide a specific estimate of the costs and/or savings to **state government** associated with the implementation of the regulation, including any legal, accounting, or consulting procedures which may be required. Explain how the dollar estimates were derived.

No fiberglass boat manufacturing facilities have been identified as being owned by state government. The Department estimates that there would be no costs or savings to local governments associated with compliance with the proposed regulation.

(22) For each of the groups and entities identified in items (19)-(21) above, submit a statement of legal, accounting or consulting procedures and additional reporting, recordkeeping or other paperwork, including copies of forms or reports, which will be required for implementation of the regulation and an explanation of measures which have been taken to minimize these requirements.

No additional legal, accounting, or consulting procedures are expected for the groups identified in items (19)-(21) above.

(23) In the table below, provide an estimate of the fiscal savings and costs associated with implementation and compliance for the regulated community, local government, and state government for the current year and five subsequent years.

	Current FY Year 13/14	FY+1 Year 14/15	FY+2 Year 15/16	FY+3 Year 16/17	FY+4 Year 17/18	FY+5 Year 18/19
SAVINGS:	\$	\$	\$	\$	\$	\$
Regulated Community	0.00	0.00	0.00	0.00	0.00	0.00
Local Government	0.00	0.00	0.00	0.00	0.00	0.00
State Government	0.00	0.00	0.00	0.00	0.00	0.00
Total Savings	0.00	0.00	0.00	0.00	0.00	0.00
COSTS:	\$	\$	\$	\$	\$	\$
Regulated Community	0.00	0.00	0.00	0.00	0.00	0.00
Local Government	0.00	0.00	0.00	0.00	0.00	0.00
State Government	0.00	0.00	0.00	0.00	0.00	0.00
Total Costs	0.00	0.00	0.00	0.00	0.00	0.00
REVENUE LOSSES:	\$	\$	\$	\$	\$	\$
Regulated Community	0.00	0.00	0.00	0.00	0.00	0.00
Local Government	0.00	0.00	0.00	0.00	0.00	0.00
State Government	0.00	0.00	0.00	0.00	0.00	0.00
Total Revenue Losses	0.00	0.00	0.00	0.00	0.00	0.00

(23a) Provide the past three year expenditure history for programs affected by the regulation.

Program	FY-3 (10/11)	FY-2 (11/12)	FY-1 (12/13)	Current FY (13/14)
Environmental Program Management (161-10382)	\$28,881,000	\$27,755,000	\$24,965,000	\$26,297,000
Clean Air Fund Major Emission Facilities (215-20077)	\$20,565,000	\$20,055,000	\$18,464,000	\$21,330,000
Clean Air Fund Mobile and Area Facilities (233-20084)	\$5,620,000	\$2,710,000	\$10,198,000	\$8,610,000

(24) For any regulation that may have an adverse impact on small businesses (as defined in Section 3 of the Regulatory Review Act, Act 76 of 2012), provide an economic impact statement that includes the following:

(a) An identification and estimate of the number of small businesses subject to the regulation.

This proposed rulemaking would apply to the owner and operator of one known Title V facility in this Commonwealth. The facility is VEC Technology, LLC, located at 639 Keystone Rd, Greenville PA 16125. A review of the Federal Small Business Size Regulations under 13 CFR Chapter 1 Part 121 indicates that VEC Technology, LLC, is a small business.

It is possible that the proposed rulemaking would also apply to owners and operators of other fiberglass boat manufacturing facilities that have not yet been identified. If the proposed rulemaking would apply to the owners or operators of other fiberglass boat manufacturing facilities, they would likely also be small businesses. It is unlikely, however, that there will be additional facilities subject to the proposed rulemaking.

The Department's assessment of how many owners and operators of facilities would be subject to the proposed rulemaking resulted from reviewing the Department's air quality permits databases and the Federal Small Business Size Regulations under 13 CFR Chapter 1, Part 121, as well as information obtained from the Pennsylvania Small Business Development Center's Environmental Management Assistance Program (EMAP). A search of the Department's "Environmental Facility Application Compliance Tracking System" (eFACTS) database and Air Information Management System (AIMS) database revealed the owner and operator of one facility in this Commonwealth as having a permit issued by the Department that includes provisions for fiberglass boat manufacturing. However, eFACTS and AIMS do not provide an exhaustive list of all fiberglass boat manufacturing facilities in this Commonwealth, but only those with which the Department has had contact and for which the Department has a reason to input data; these are usually the largest emitters. The Federal Small Business Size Regulations specify that a company with the "boat building" NAICS code is considered to be a "small business" if it has 500 or fewer employees. Department staff contacted the owner or operator of all businesses that appeared on a list of small Pennsylvania businesses generated under the "boat building" NAICS code obtained from the Pennsylvania Small Business Development Center EMAP. The owners or operators of these businesses had identified themselves as being connected with boat manufacturing, but none of them made the types of components covered by the proposed rulemaking.

Therefore, the Department anticipates that the proposed rulemaking would apply to the owner and operator of only one facility, which is also classified as a small business.

(b) The projected reporting, recordkeeping, and other administrative costs required for compliance with the proposed regulation, including the type of professional skills necessary for preparation of the report or record.

The Department expects the owner and operator of only one facility in this Commonwealth to be subject to the proposed rulemaking. Operations at this facility are already regulated under a Federally-enforceable Title V permit issued to the owner and operator on January 23, 2008, which contains requirements similar to those in the proposed rulemaking. The facility is VEC Technology, LLC, located at 639 Keystone Rd, Greenville PA 16125. The owner or operator of this facility is already complying with the applicable HAP emission reduction requirements set forth in the Federally-enforceable Title V permit issued by the Department to the owner and operator on January 23, 2008. There are no further recordkeeping, legal, accounting or consulting procedures established in the proposed rulemaking beyond what this facility's Title V permit includes. The owner or operator of this facility would not need to do anything more than it already does. The Department estimates that there will be no costs or savings to the owner or operator of

this facility from the proposed rulemaking.

(c) A statement of probable effect on impacted small businesses.

The owner and operator of a fiberglass boat manufacturing facility that would be subject to the proposed rulemaking would likely incur little, if any, cost to implement the requirements of the proposed rulemaking. The proposed rulemaking provides as one compliance option the use of individually-compliant open molding resin and gel coat materials and the use of compliant cleaning solvents. Open molding resin, gel coat and cleaning materials that are compliant with the proposed rulemaking VOC content and emission rate limits are readily available to the owners and operators of all sizes of facilities. The VOC content limits and emission rate limits for production resins and tooling resins also depend on the application method used to apply the resin. Production and tooling resins may be applied using either atomizing or non-atomizing methods. Non-atomizing resin application methods reduce the emissions of VOC from the resins compared to application with an atomizing method, thereby enabling use of higher VOC-content resins. A production or tooling resin can contain a higher amount of VOC but still emit less VOC during application if a non-atomizing technology is used rather than an atomizing technology. The industry has experienced a shift to non-atomizing resin application methods that are required to comply with the 2001 NESHAP HAP emission reduction measures. This shift has occurred at all sizes of facilities across the U.S. because of the productivity and economic benefits of using non-atomizing methods over conventional atomizing methods.

As a second compliance option, the proposed rulemaking would provide flexibility by allowing compliance through averaging of VOC emission rates of open molding resin and gel coat materials. A third compliance option, the use of a VOC emissions capture system and add-on air pollution control device, is also provided. However, because of the wide availability and lower cost (compared to add-on controls) of compliant VOC content materials and alternative application methods, compliant materials and select application methods are generally used to reduce VOC emissions from fiberglass boat manufacturing facilities.

(d) A description of any less intrusive or less costly alternative methods of achieving the purpose of the proposed regulation.

There are no alternative regulatory provisions available. In accordance with sections 172(c)(1), 182(b)(2)(A) and 184(b)(1)(B) of the CAA, the proposed rulemaking establishes the VOC emission limitations and other requirements of the EPA 2008 Fiberglass Boat Manufacturing Materials Control Techniques Guidelines as RACT for these sources in this Commonwealth. See *Consumer and Commercial Products, Group IV: Control Techniques Guidelines in Lieu of Regulations for Miscellaneous Metal Products Coatings, Plastic Parts Coatings, Auto and Light-Duty Truck Assembly Coatings, Fiberglass Boat Manufacturing Materials, and Miscellaneous Industrial Adhesives*, 73 FR 58481, 58483 (October 7, 2008).

(25) List any special provisions which have been developed to meet the particular needs of affected groups or persons including, but not limited to, minorities, the elderly, small businesses, and farmers.

Minorities, the elderly, small businesses, and farmers who are not owners or operators of a fiberglass boat manufacturing facility subject to the proposed rulemaking would not be affected by the proposed rulemaking. For those that might be owners or operators of a fiberglass boat manufacturing facility subject to the proposed rulemaking, no special provisions are necessary. As explained above in response to question (15), compliant VOC materials are already readily available and widely in use.

(26) Include a description of any alternative regulatory provisions which have been considered and rejected

and a statement that the least burdensome acceptable alternative has been selected.

The proposed rulemaking is considered the least burdensome acceptable method of ensuring compliance with the Federal RACT mandate. In accordance with sections 172(c)(1), 182(b)(2)(A) and 184(b)(1)(B) of the CAA, the proposed rulemaking establishes the VOC emission limitations and other requirements of the EPA 2008 Fiberglass Boat Manufacturing Materials Control Techniques Guidelines as RACT for these sources in this Commonwealth. See *Consumer and Commercial Products, Group IV: Control Techniques Guidelines in Lieu of Regulations for Miscellaneous Metal Products Coatings, Plastic Parts Coatings, Auto and Light-Duty Truck Assembly Coatings, Fiberglass Boat Manufacturing Materials, and Miscellaneous Industrial Adhesives*, 73 FR 58481, 58483 (October 7, 2008).

The owner and operator of a facility that would be subject to the proposed rulemaking would likely incur little, if any, additional cost to implement the requirements of the proposed rulemaking. The proposed rulemaking provides as one compliance option the use of individually-compliant open molding resin and gel coat materials and the use of compliant cleaning solvents. Open molding resin, gel coat and cleaning materials that are compliant with the proposed rulemaking VOC content and emission rate limits are readily available to the owners and operators of all sizes of facilities. The VOC content limits and emission rate limits for production resins and tooling resins also depend on the application method used to apply the resin. Production and tooling resins may be applied using either atomizing or non-atomizing methods. Non-atomizing resin application methods reduce the emissions of VOC from the resins compared to application with an atomizing method, thereby enabling use of a higher VOC-content resin. A production or tooling resin can contain a higher amount of VOC but still emit less VOC during application if a non-atomizing technology is used rather than an atomizing technology. The industry has experienced a shift to non-atomizing resin application methods that are required to comply with the 2001 NESHAP HAP emission reduction measures. This shift has occurred at all sizes of facilities across the U.S. because of the productivity and economic benefits of using non-atomizing methods over conventional atomizing methods.

As a second option, the proposed rulemaking would provide flexibility by allowing compliance through averaging of VOC emission rates of open molding resin and gel coat materials. A third compliance option, the use of a VOC emissions capture system and add-on air pollution control device, is also provided. However, because of the wide availability and lower cost (compared to add-on controls) of compliant VOC content materials and alternative application methods, compliant materials and select application methods are generally used to reduce VOC emissions from fiberglass boat manufacturing facilities.

(27) In conducting a regulatory flexibility analysis, explain whether regulatory methods were considered that will minimize any adverse impact on small businesses (as defined in Section 3 of the Regulatory Review Act, Act 76 of 2012), including:

(a) The establishment of less stringent compliance or reporting requirements for small businesses.

No adverse impact or additional cost is expected for the owners and operators of small businesses. Less stringent compliance requirements are not available, as the proposed rulemaking is and must be designed to achieve the “reasonably available control technology” (RACT) requirements of the CAA. The EPA set forth its recommendations for RACT for this industry in its *Control Techniques Guidelines for Fiberglass Boat Manufacturing Materials*, EPA 453/R-08-004, Office of Air Quality Planning and Standards, EPA, September 2008. Open molding resin, gel coat and cleaning materials that are compliant with the proposed rulemaking VOC content and emission rate limits are readily available to the owners and operators of all sizes of facilities and likely already being used. Non-atomizing application methods are likely also being used due to the productivity and economic benefits of these methods compared to atomizing methods. The

Department has proposed the least stringent recordkeeping and reporting requirements available that would ensure compliance with the proposed rulemaking. The proposed recordkeeping requirements are minimal and reporting is only necessary upon Department request.

(b) The establishment of less stringent schedules or deadlines for compliance or reporting requirements for small businesses.

No adverse impact or additional cost is expected for the owners and operators of small businesses. As explained in response to question (9), above, the proposed rulemaking is overdue to the EPA for review and approval as a revision to the Pennsylvania SIP. Further delay of implementation would not be advisable as the Commonwealth is at risk of sanctions imposed by the Administrator of the EPA under section 179 of the CAA, nor is it needed. The owner and operator of the one known facility, VEC Technology, LLC, that would be subject to the proposed rulemaking VOC emission reduction requirements are already complying with these requirements. The proposed rulemaking VOC emission reduction requirements are similar to, and no more stringent than, the applicable HAP emission reduction requirements already incorporated in the Federally-enforceable Title V permit issued by the Department to the owner and operator of this facility on January 23, 2008. A review of the Federal Small Business Size Regulations under 13 CFR Chapter 1, Part 121 indicates that VEC Technology, LLC, is a small business.

If the proposed rulemaking applies to the owners and operators of fiberglass boat manufacturing facilities that have not yet been identified, whether or not they are small businesses, these owners and operators are also likely in compliance. Open molding resin, gel coat and cleaning materials that are compliant with the proposed rulemaking VOC content and emission rate limits are, and have been, readily available to the owners and operators of all sizes of facilities and likely already being used. Non-atomizing application methods are likely also being used due to the productivity and economic benefits of these methods compared to atomizing application methods.

(c) The consolidation or simplification of compliance or reporting requirements for small businesses.

No adverse impact or additional cost is expected for the owners and operators of small businesses. The compliance options set forth in the proposed rulemaking should allow the owner or operator of any small business that would be subject to the proposed rulemaking to find a method of compliance appropriate to its operation. Open molding resin, gel coat and cleaning materials that are compliant with the proposed rulemaking VOC content and emission rate limits are readily available to the owners and operators of all sizes of facilities. Non-atomizing application methods are widely used due to the productivity and economic benefits of these methods compared to atomizing application methods. The proposed recordkeeping requirements are minimal and reporting is only necessary upon Department request.

(d) The establishment of performing standards for small businesses to replace design or operational standards required in the regulation.

No adverse impact or additional cost is expected for the regulated community to comply with the requirements of the proposed rulemaking. Open molding resin, gel coat and cleaning materials that are compliant with the proposed rulemaking VOC content and emission rate limits are readily available to the owners and operators of all sizes of facilities. Non-atomizing application methods are widely used due to the productivity and economic benefits of these methods compared to atomizing application methods.

The proposed rulemaking would provide flexibility in compliance with two options: 1) The use of VOC emission rates averaging of compliant and non-compliant open molding resin and gel coat materials; and 2)

The use of a VOC emissions capture system and add-on air pollution control device. The compliance options set forth in the proposed rulemaking should allow the owner or operator of any small business that would be subject to the proposed rulemaking to find a method of compliance appropriate to its operation. However, because of the wide availability and lower cost (compared to add-on controls) of compliant VOC content materials and alternative application methods, compliant materials and select application methods are likely to be used to reduce VOC emissions from fiberglass boat manufacturing facilities.

(e) The exemption of small businesses from all or any part of the requirements contained in the regulation.

RACT regulations are a Federal CAA requirement, applicable to the owners and operators of all sources that meet the applicable VOC emission thresholds regardless of business size. The owner and operator of a manufacturing facility may be classified as a small business under the Federal Small Business Size Regulations under 13 CFR Chapter 1, Part 121, while still emitting sufficient emissions of VOC to be subject to regulations designed to implement measures for the control of those VOC emissions.

This proposed rulemaking would apply to the owner and operator of one known Title V facility in this Commonwealth. The facility is VEC Technology, LLC, located at 639 Keystone Rd, Greenville PA 16125. A review of the Federal Small Business Size Regulations under 13 CFR Chapter 1, Part 121, indicates that VEC Technology, LLC, is a small business. Fiberglass boat manufacturing operations at this facility are already subject to applicable HAP emission reduction requirements incorporated in the Federally-enforceable Title V permit issued to the owner and operator by the Department on January 23, 2008. The Title V permit contains emission reduction requirements similar to those in the proposed rulemaking. The owner or operator of this facility has the technical sophistication to comply, and is already complying, with the applicable requirements incorporated in the Title V permit and would need to do nothing more to comply with the requirements of the proposed rulemaking.

If the proposed rulemaking would apply to the owners and operators of fiberglass boat manufacturing facilities that have not yet been identified, whether or not they are small businesses, these owners and operators are also likely in compliance. Open molding resin, gel coat and cleaning materials that are compliant with the proposed rulemaking VOC content and emission rate limits are, and have been, readily available to the owners and operators of all sizes of facilities and likely already being used. Non-atomizing application methods are likely also being used due to the productivity and economic benefits of these methods compared to atomizing application methods.

(28) If data is the basis for this regulation, please provide a description of the data, explain in detail how the data was obtained, and how it meets the acceptability standard for empirical, replicable and testable data that is supported by documentation, statistics, reports, studies or research. Please submit data or supporting materials with the regulatory package. If the material exceeds 50 pages, please provide it in a searchable electronic format or provide a list of citations and internet links that, where possible, can be accessed in a searchable format in lieu of the actual material. If other data was considered but not used, please explain why that data was determined not to be acceptable.

State Implementation Plans; General Preamble for Proposed Rulemaking on Approval of Plan Revisions for Nonattainment Areas—Supplement (on Control Techniques Guidelines), 44 FR 53761 (September 17, 1979).

Control Techniques Guidelines for Fiberglass Boat Manufacturing Materials, EPA 453/R-08-004, Office of Air Quality Planning and Standards, EPA, September 2008. The Fiberglass Boat Manufacturing Materials CTG is available on the EPA website at:

www.epa.gov/airquality/ozonepollution/SIPToolkit/ctgs.html.

Consumer and Commercial Products, Group IV: Control Techniques Guidelines in Lieu of Regulations for Miscellaneous Metal Products Coatings, Plastic Parts Coatings, Auto and Light-Duty Truck Assembly Coatings, Fiberglass Boat Manufacturing Materials, and Miscellaneous Industrial Adhesives, 73 FR 58481 (October 7, 2008).

Regulatory Impact Analysis, Final National Ambient Air Quality Standard for Ozone, July 2011, U.S. Environmental Protection Agency, Office of Air and Radiation, Office of Air Quality Planning and Standards, Research Triangle Park, NC, 27711, http://epa.gov/glo/pdfs/201107_OMBdraft-OzoneRIA.pdf.

Pennsylvania Hardwoods Development Council, Biennial Report, 2009-2010.

http://www.agriculture.state.pa.us/portal/server.pt/gateway/PTARGS_0_2_24476_10297_0_43/AgWebsite/Files/Publications/Hardwoods%20Biennial%20Report%202010.pdf

Pennsylvania Hardwoods Development Council, Photo, *Pennsylvania Hardwood Leading the Nation*.

http://www.agriculture.state.pa.us/portal/server.pt/gateway/PTARGS_0_2_24476_10297_0_43/AgWebsite/Files/Publications/8631_panel11_Leading_the_Nation_100ppi.jpg

National Emission Standards for Hazardous Air Pollutants for Boat Manufacturing, 40 CFR part 63, subpart VVVV (relating to National emission standards for hazardous air pollutants for boat manufacturing) (2001 NESHAP), set forth at 40 CFR 63.5680—63.5779.

(29) Include a schedule for review of the regulation including:

- | | |
|---|------------------------------------|
| A. The date by which the agency must receive public comments: | <u>3rd Quarter 2014</u> |
| B. The date or dates on which public meetings or hearings will be held: | <u>3rd Quarter 2014</u> |
| C. The expected date of promulgation of the proposed regulation as a final-form regulation: | <u>3rd Quarter 2015</u> |
| D. The expected effective date of the final-form regulation: | <u>Date of publication</u> |
| E. The date by which compliance with the final-form regulation will be required: | <u>Date of publication</u> |
| F. The date by which required permits, licenses or other approvals must be obtained: | <u>NA</u> |

(30) Describe the plan developed for evaluating the continuing effectiveness of the regulations after its implementation.

This regulation will be reviewed in accordance with the sunset review schedule published by the Department to determine whether the regulation effectively fulfills the goals for which it was intended.

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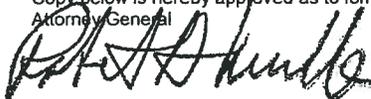
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By: (Deputy Attorney General)

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promulgated by:

DEPARTMENT OF ENVIRONMENTAL
PROTECTION
ENVIRONMENTAL QUALITY BOARD

(AGENCY)

DOCUMENT/FISCAL NOTE NO. 7-487

DATE OF ADOPTION MAY 21, 2014

BY

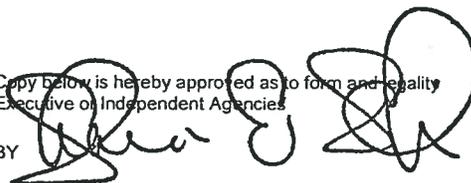


TITLE E. CHRISTOPHER ABRUZZO
CHAIRMAN

EXECUTIVE OFFICER CHAIRMAN OR SECRETARY

Copy below is hereby approved as to form and legality
Executive of Independent Agencies

BY



DATE OF APPROVAL

~~(Exec. Deputy General Counsel)~~
~~(Chief Counsel - Independent Agency)~~
(Strike inapplicable title)

Check if applicable. No Attorney General Approval
or objection within 30 days after submission.

NOTICE OF PROPOSED RULEMAKING

DEPARTMENT OF ENVIRONMENTAL PROTECTION
ENVIRONMENTAL QUALITY BOARD

Control of VOC Emissions from Fiberglass Boat Manufacturing Materials

25 Pa. Code, Chapter 129

**PROPOSED RULEMAKING
ENVIRONMENTAL QUALITY BOARD
[25 PA CODE CH. 129]**

Control of VOC Emissions from Fiberglass Boat Manufacturing Materials

The Environmental Quality Board (Board) proposes to amend Chapter 129 (relating to standards for sources) to read as set forth in Annex A. The proposed rulemaking would amend Chapter 129 to add § 129.74 (relating to control of VOC emissions from fiberglass boat manufacturing materials) to adopt reasonably available control technology (RACT) requirements and RACT emission limitations for stationary sources of volatile organic compound (VOC) emissions from fiberglass boat manufacturing materials including open molding resins, gel coats and cleaning materials. The proposed rulemaking would also add terms and definitions to § 129.74 to support the interpretation of the proposed measures.

This proposed rulemaking will be submitted to the United States Environmental Protection Agency (EPA) for approval as a revision to the Commonwealth's State Implementation Plan (SIP) following promulgation of the final-form regulation.

This notice is given under Board order at its meeting of May 21, 2014.

A. Effective Date

This proposed rulemaking will be effective upon final-form publication in the *Pennsylvania Bulletin*.

B. Contact Persons

For further information, contact Kirit Dalal, Chief, Division of Air Resource Management, Bureau of Air Quality, Rachel Carson State Office Building, P.O. Box 8468, Harrisburg, PA 17105-8468, (717) 772-3436; or Kristen Furlan, Assistant Director, Bureau of Regulatory Counsel, Rachel Carson State Office Building, P.O. Box 8464, Harrisburg, PA 17105-8464, (717) 787-7060. Information regarding submitting comments on this proposed rulemaking appears in Section J of this preamble. Persons with a disability may use the Pennsylvania AT&T Relay Service, (800) 654-5984 (TDD users) or (800) 654-5988 (voice users). This proposed rulemaking is available electronically on the Department of Environmental Protection's (Department) web site at www.dep.state.pa.us (DEP Search/Keyword: EQB).

C. Statutory Authority

The proposed rulemaking is authorized under section 5(a)(1) of the Air Pollution Control Act (APCA) (35 P.S. § 4005(a)(1)), which grants the Board the authority to adopt rules and regulations for the prevention, control, reduction and abatement of air pollution in this Commonwealth. Section 5(a)(8) of the APCA also grants the Board the authority to adopt rules and regulations designed to implement the provisions of the Clean Air Act (CAA) (42 U.S.C.A. §§ 7401—7671q).

D. *Background and Purpose*

The purpose of this proposed rulemaking is to implement control measures to reduce VOC emissions from fiberglass boat manufacturing materials including open molding resin, gel coat and cleaning materials. VOCs are precursors for ground-level ozone formation. Ground-level ozone, a public health and welfare hazard, is not emitted directly to the atmosphere by fiberglass boat manufacturing materials including open molding resin, gel coat and cleaning materials, but is formed by a photochemical reaction between VOCs and nitrogen oxides (NO_x) in the presence of sunlight. In accordance with sections 172(c)(1), 182(b)(2)(A) and 184(b)(1)(B) of the CAA (42 U.S.C.A. §§ 7502(c)(1), 7511a(b)(2)(A) and 7511c(b)(1)(B)), the proposed rulemaking establishes the VOC emission limitations and other requirements of the EPA 2008 Fiberglass Boat Manufacturing Materials Control Techniques Guidelines (CTG) for these sources in this Commonwealth. See *Consumer and Commercial Products, Group IV: Control Techniques Guidelines in Lieu of Regulations for Miscellaneous Metal Products Coatings, Plastic Parts Coatings, Auto and Light-Duty Truck Assembly Coatings, Fiberglass Boat Manufacturing Materials, and Miscellaneous Industrial Adhesives*, 73 FR 58481, 58483 (October 7, 2008).

The EPA is responsible for establishing National Ambient Air Quality Standards (NAAQS) for six criteria pollutants considered harmful to public health and the environment: ground-level ozone, particulate matter, NO_x, carbon monoxide, sulfur dioxide and lead. The CAA established two types of NAAQS: primary standards, which are limits set to protect public health; and secondary standards, which are limits set to protect public welfare and the environment, including protection against visibility impairment and from damage to animals, crops, vegetation and buildings. The EPA established primary and secondary ground-level ozone NAAQS to protect public health and welfare.

Ground-level ozone is a highly reactive gas, which at sufficiently high concentrations can produce a wide variety of harmful effects. At elevated concentrations, ground-level ozone can adversely affect human health, animal health, vegetation, materials, economic values and personal comfort and well-being. It can cause damage to important food crops, forests, livestock and wildlife. Repeated exposure to ozone pollution may cause a variety of adverse health effects for both healthy people and those with existing conditions, including difficulty in breathing, chest pains, coughing, nausea, throat irritation, and congestion. It can worsen bronchitis, heart disease, emphysema and asthma and reduce lung capacity. Asthma is a significant and growing threat to children and adults. High levels of ground-level ozone affect animals in ways similar to humans. High levels of ground-level ozone can also cause damage to buildings and synthetic fibers, including nylon, and reduced visibility on roadways and in natural areas. The implementation of additional measures to address ozone air quality nonattainment in this Commonwealth is necessary to protect the public health and welfare, animal and plant health and welfare and the environment.

In July 1997, the EPA promulgated primary and secondary ozone standards at a level of 0.08 part per million (ppm) averaged over 8 hours. See 62 FR 38855 (July 18, 1997). In 2004, the EPA designated 37 counties in this Commonwealth as 8-hour ozone nonattainment areas for the 1997 8-hour ozone NAAQS. Based on preliminary data for the 2013 ozone season, all monitored areas of the Commonwealth are attaining the 1997 8-hour ozone NAAQS. The Department must ensure that the

1997 ozone standard is attained and maintained by implementing permanent and enforceable control measures to ensure violations of the standard do not occur for the next decade.

In March 2008, the EPA lowered the standard to 0.075 ppm averaged over 8 hours to provide even greater protection for children, other at-risk populations and the environment against the array of ozone-induced adverse health and welfare effects. See 73 FR 16436 (March 27, 2008). In April 2012, the EPA designated five areas in Pennsylvania as nonattainment for the 2008 ozone NAAQS. See 77 FR 30088, 30143 (May 21, 2012). These areas include all or a portion of the following counties: Allegheny, Armstrong, Berks, Beaver, Bucks, Butler, Carbon, Chester, Delaware, Fayette, Lancaster, Lehigh, Montgomery, Northampton, Philadelphia, Washington and Westmoreland. The Commonwealth must ensure that these areas attain the 2008 ozone standard by 2015 and that they continue to maintain the standard thereafter.

There are no Federal statutory or regulatory limits for VOC emissions from fiberglass boat manufacturing materials. In 2001, however, the EPA promulgated the National Emission Standards for Hazardous Air Pollutants for Boat Manufacturing, 40 CFR Part 63, Subpart VVVV (relating to National emission standards for hazardous air pollutants for boat manufacturing) (2001 NESHAP), set forth at 40 CFR 63.5680—63.5779. The 2001 NESHAP established organic hazardous air pollutant (HAP) emissions limits based on low-HAP resins and gel coats and low-emitting resin application technology. Many HAPs are VOCs, but not all VOCs are HAPs. The 2001 NESHAP data, however, indicate that styrene and methyl methacrylate (MMA), which are both organic HAP and VOC, account for nearly all the VOC emissions, as well as HAP emissions, from fiberglass boat manufacturing facilities. Therefore, total HAP and VOC emissions from fiberglass boat manufacturing facilities are nearly equal.

When developing the VOC emission reduction RACT measures included in its Fiberglass Boat Manufacturing Materials CTG, the EPA took into account the HAP emission reduction measures of the 2001 NESHAP for the boat manufacturing industry. The requirements of the 2001 NESHAP apply to "major sources" of HAP from boat manufacturing operations. For the purpose of regulating HAPs, a "major source" is considered to be a stationary source or group of stationary sources located within a contiguous area and under common control that emits or has the potential to emit considering controls, in the aggregate, 10 tons per year (tpy) of any single listed HAP or 25 tpy of any combination of HAPs. See section 112(a)(1) of the CAA (42 U.S.C.A. § 7412(a)(1)); see also 61 FR 27133 (May 30, 1996).

State regulations to control VOC emissions from fiberglass boat manufacturing materials are required under Federal law and will be reviewed and approved by the EPA if the provisions meet the RACT requirements of the CAA and its implementing regulations. See *Consumer and Commercial Products, Group IV: Control Techniques Guidelines in Lieu of Regulations for Miscellaneous Metal Products Coatings, Plastic Parts Coatings, Auto and Light-Duty Truck Assembly Coatings, Fiberglass Boat Manufacturing Materials, and Miscellaneous Industrial Adhesives*, 73 FR 58481, 58483. The EPA defines RACT as "the lowest emission limitation that a particular source is capable of meeting by the application of control technology that is reasonably available considering technological and economic feasibility." See *State Implementation Plans; General Preamble for Proposed Rulemaking on Approval of Plan Revisions for Nonattainment Areas—Supplement (on Control Techniques Guidelines)*, 44 FR 53761 (September 17, 1979).

Section 172(c)(1) of the CAA (42 U.S.C.A. § 7502(c)(1)) provides that SIPs for nonattainment areas must include “reasonably available control measures,” including RACT, for sources of emissions. Section 182(b)(2) of the CAA (42 U.S.C.A. § 7511a(b)(2)) provides that for moderate ozone nonattainment areas, states must revise their SIPs to include RACT for sources of VOC emissions covered by a CTG document issued by the EPA prior to the area’s date of attainment. More importantly, section 184(b)(1)(B) of the CAA (42 U.S.C.A. § 7511c(b)(1)(B)) requires that states in the Ozone Transport Region (OTR), including the Commonwealth, submit a SIP revision requiring implementation of RACT for all sources of VOC emissions in the state covered by a specific CTG.

Section 183(e) of the CAA (42 U.S.C.A. § 7511b(e)) directs the EPA to list for regulation those categories of products that account for at least 80% of the VOC emissions from consumer and commercial products in ozone nonattainment areas. Section 183(e)(3)(C) of the CAA (42 U.S.C.A. § 7511b(e)(3)(C)) further provides that the EPA may issue a CTG document in place of a National regulation for a product category where the EPA determines that the CTG will be “substantially as effective as regulations” in reducing emissions of VOC in ozone nonattainment areas. In 1995, the EPA listed fiberglass boat manufacturing on its section 183(e) list and, in 2008, the EPA issued a CTG for this product category. See 60 FR 15264, 15267 (March 23, 1995) and 73 FR 58481; *Control Techniques Guidelines for Fiberglass Boat Manufacturing Materials*, EPA 453/R-08-004, Office of Air Quality Planning and Standards, EPA, September 2008. The Fiberglass Boat Manufacturing Materials CTG is available on the EPA website at: www.epa.gov/airquality/ozonepollution/SIPToolkit/ctgs.html.

In the 2008 notice of final determination and availability of final Control Techniques Guidelines, the EPA determined that the recommendations of the Fiberglass Boat Manufacturing Materials CTG would be substantially as effective as National regulations in reducing VOC emissions from the fiberglass boat manufacturing materials product category in ozone nonattainment areas. See 73 FR 58481. The CTG provides states with the EPA’s recommendation of what constitutes RACT for the covered category. States can use the federal recommendations provided in the CTG to inform their own determination as to what constitutes RACT for VOC emissions from the covered category. State air pollution control agencies may implement other technically-sound approaches that are consistent with the CAA requirements and the EPA’s implementing regulations or guidelines.

The Department reviewed the recommendations included in the 2008 Fiberglass Boat Manufacturing Materials CTG for their applicability to the ground-level ozone reduction measures necessary for this Commonwealth. The Bureau of Air Quality has determined that the measures provided in the Fiberglass Boat Manufacturing Materials CTG are appropriate to be implemented in this Commonwealth as RACT for this category.

This proposed rulemaking would affect the owner and operator of one known Title V major facility in this Commonwealth. The Board anticipates that the affected owner of the facility would demonstrate compliance with the proposed measures to reduce VOC emissions because this facility is already subject to the 2001 NESHAP HAP emission control requirements. These NESHAP provisions are applicable requirements in the Federally-enforceable Title V permit

issued by the Department to the owner and operator on January 23, 2008. It is possible that the proposed rulemaking would also affect owners and operators of other fiberglass boat manufacturing facilities that have not yet been identified, because the 2001 NESHAP does not apply to area sources (that is, sources that emit less than 10 tpy of any single listed HAP or less than 25 tpy of any combination of HAPs). Owners and operators of area source fiberglass boat manufacturing facilities are, therefore, not currently required to implement the HAP-reduction measures provided in the 2001 NESHAP, which are also included in the 2008 Fiberglass Boat Manufacturing Materials CTG as measures for reducing emissions of VOCs from sources that meet the applicability threshold recommended by the EPA in the CTG.

The ground-level ozone reduction measures included in this proposed rulemaking would achieve VOC emission reductions locally and would also reduce the transport of VOC emissions and ground-level ozone to downwind states, if implemented for potentially unidentified existing sources of VOC emissions from fiberglass boat manufacturing operations including open molding resin and gel coat materials that are not currently controlled in the Commonwealth. Adoption of VOC emission requirements for fiberglass boat manufacturing materials is part of the Commonwealth's strategy, in concert with other OTR jurisdictions, to further reduce transport of VOC ozone precursors and ground-level ozone throughout the OTR to attain and maintain the 8-hour ozone NAAQS.

The proposed rulemaking is required under the CAA and is reasonably necessary to attain and maintain the health- and welfare-based 8-hour ozone NAAQS and to satisfy related CAA requirements in this Commonwealth. If published as a final-form regulation in the *Pennsylvania Bulletin*, this proposed rulemaking will be submitted to the EPA as a revision to the Commonwealth's SIP.

The proposed rulemaking was discussed with the Air Quality Technical Advisory Committee (AQTAC) on December 12, 2013. The AQTAC voted unanimously to concur with the Department's recommendation to forward the proposed rulemaking to the Board for consideration. The proposed rulemaking was discussed with the Small Business Compliance Advisory Committee (SBCAC) on April 23, 2014. The SBCAC also voted unanimously to forward the proposed rulemaking to the Board for consideration. The proposed rulemaking was discussed with the Citizens Advisory Council (CAC) Policy and Regulatory Oversight (PRO) Committee on March 12, 2014. On the recommendation of the PRO Committee, on March 18, 2014, the CAC concurred with the Department's recommendation to forward the proposed rulemaking to the Board.

E. *Summary of Regulatory Requirements*

§ 129.74. Control of VOC emissions from fiberglass boat manufacturing materials.

Under proposed subsection (a), the proposed rulemaking would apply statewide to the owner and operator of a facility that manufactures a hull or a deck of a boat or a related part from fiberglass, builds a mold or plug to make a fiberglass boat hull or deck or related part, or makes polyester resin putties for assembling fiberglass boat parts, when the total actual VOC emissions from fiberglass boat manufacturing operations identified in Table I are equal to or greater than 15

pounds (6.8 kilograms) per day or 2.7 tons per 12-month rolling period, before consideration of controls. The total actual VOC emissions include the actual VOC emissions from the manufacture of hulls or decks from fiberglass, fiberglass boat parts (including small parts such as hatches, seats and lockers), molds or plugs for fiberglass hulls, decks or boat parts, resin and gel coat mixing operations, resin and gel coat application equipment and related cleaning activities at the facility. As with all RACT regulations, an owner or operator remains subject to the regulation even if the throughput or VOC emissions fall below the applicability threshold.

Proposed subsection (a) also specifies that the proposed rulemaking would not apply to the owner and operator of a facility that manufactures boat trailers or parts of boats, such as hatches, seats and lockers, but does not manufacture hulls or decks of boats from fiberglass or build molds to make fiberglass boat hulls or decks. Further, proposed subsection (a) establishes monomer VOC content limits for open molding resin and gel coat materials.

Under proposed subsection (b), the proposed regulation establishes 39 definitions to support the proposed rulemaking.

Under proposed subsection (c) exceptions are established for certain operating circumstances.

Under proposed subsection (d), the requirements of this proposed rulemaking supersede the requirements of a RACT permit issued to an owner and operator of a source subject to this section, except to the extent the RACT permit contains more stringent requirements.

Under proposed subsection (e), the owner and operator of a facility subject to this section shall comply with the applicable requirements on the effective date of adoption of this proposed rulemaking.

Under proposed subsection (f), the owner and operator of a facility subject to this section may not cause or permit the emission into the outdoor atmosphere of monomer VOCs from an open molding resin or gel coat fiberglass boat manufacturing operation, a resin or gel coat mixing operation, or a resin or gel coat application equipment cleaning operation unless one or more of the specified limitations is met. Three options for meeting the emission limits are proposed: use of compliant materials as listed in Table I; monomer VOC emissions averaging; or installation of a VOC emissions capture system and add-on air pollution control device.

Under proposed subsection (g), the owner and operator of a facility subject to this section opting to install a VOC emissions capture system and add-on air pollution control device must obtain a plan approval prior to installation and operation of the VOC emissions capture system and add-on air pollution control device.

Under proposed subsection (h), the owner and operator of a facility subject to this section may use an adjusted monomer VOC emission rate for filled production resins and filled tooling resins in each of the options specified in subsection (f).

Under proposed subsection (i), the monomer VOC content of an open molding resin, gel coat, filled production resin or filled tooling resin material not included in an emissions averaging

option in subsection (f)(2) shall meet the monomer VOC content requirements of subsection (f)(1) or the add-on air pollution control requirements of subsection (f)(3).

Under proposed subsection (j), alternative requirements for control of monomer VOC content for certain resin and gel coat materials are established.

Under proposed subsection (k), work practices for resin and gel coat materials are established.

Under proposed subsection (l), VOC content limits and work practices for cleaning materials are established.

Under proposed subsection (m), compliance and monitoring requirements are established.

Under proposed subsection (n), sampling and testing standards are established.

Under proposed subsection (o), recordkeeping requirements are established.

Under proposed subsection (p), reporting requirements are established.

F. Benefits, Costs and Compliance

Benefits

Implementation of the VOC emission control measures in the proposed rulemaking would benefit the health and welfare of the approximately 12 million residents and the numerous animals, crops, vegetation and natural areas of this Commonwealth by reducing emissions of VOCs, which are precursors to the formation of ground-level ozone air pollution. Exposure to high concentrations of ground-level ozone is a serious human and animal health and welfare threat, causing respiratory illnesses and decreased lung function, agricultural crop loss, visible foliar injury to sensitive plant species, and damage to forests, ecosystems and infrastructure. Reduced ambient concentrations of ground-level ozone would reduce the incidences of hospital admissions for respiratory ailments including asthma and improve the quality of life for citizens overall. While children, the elderly and those with respiratory problems are most at risk, even healthy individuals may experience increased respiratory ailments and other symptoms when they are exposed to high levels of ambient ground-level ozone while engaged in activities that involve physical exertion.

This proposed rulemaking is designed to adopt the standards and recommendations in the EPA's 2008 Fiberglass Boat Manufacturing Materials CTG to meet the requirements of CAA sections 172(c)(1), 182(b)(2) and 184(b)(1)(B) (42 U.S.C.A. §§ 7502(c)(1), 7511a(b)(2) and 7511c(b)(1)(B)). The proposed rulemaking would apply the CTG's standards and recommendations across this entire Commonwealth, as required by CAA section 184(b)(1)(B).

The statewide implementation of the proposed rulemaking control measures would assist the Department in reducing VOC emissions from fiberglass boat manufacturing operations locally, and reducing the resultant local formation of ground-level ozone and transport of VOC emissions

and ground-level ozone to downwind states. Statewide implementation would also facilitate implementation and enforcement of the proposed rulemaking within this Commonwealth. The measures in the proposed rulemaking are reasonably necessary to attain and maintain the health- and welfare-based 8-hour ozone NAAQS and to satisfy related CAA requirements in this Commonwealth.

The proposed rulemaking may create economic opportunities for VOC emission control technology innovators, manufacturers, and distributors through an increased demand for new or improved equipment. In addition, the owners and operators of regulated facilities may be required to install and operate an emissions monitoring system or equipment necessary for an emissions monitoring method in order to comply with the rulemaking, thereby creating an economic opportunity for the emissions monitoring industry.

Compliance Costs

The Board does not anticipate additional costs from these proposed VOC emission reduction measures for the owner and operator of this Title V facility which is already subject to the EPA's 2001 NESHAP HAP emission control requirements. These applicable requirements are incorporated in the Federally-enforceable Title V permit issued by the Department to the owner and operator on January 23, 2008. Therefore there would be no additional compliance costs to the owner and operator of this source from implementation of this proposed rulemaking. It is possible that the proposed rulemaking would also affect owners and operators of other fiberglass boat manufacturing facilities that have not yet been identified, because the HAP emission reduction measures of the 2001 NESHAP do not apply to the owners and operators of area sources (that is, sources that emit less than 10 tpy of any single listed HAP or less than 25 tpy of any combination of HAPs). Owners and operators of area source fiberglass boat manufacturing facilities are, therefore, not currently required to implement the HAP emission reduction measures provided in the 2001 NESHAP, which are also included in the 2008 Fiberglass Boat Manufacturing Materials CTG as measures for reducing emissions of VOCs from sources that meet the applicability threshold recommended by the EPA in the CTG.

The owner and operator of a facility that is not subject to the 2001 NESHAP that would be subject to the proposed rulemaking would be expected to incur little, if any, cost to implement the requirements of the proposed rulemaking. The proposed rulemaking provides as one compliance option the use of individually-compliant resin and gel coat materials in subsection (f)(1), and requires the use of compliant cleaning solvents in subsection (l). Open molding resin, gel coat and cleaning materials that are compliant with the HAP content limits set forth in the 2001 NESHAP and with the proposed rulemaking VOC content limits set forth in subsection (a) are readily available to all sizes of facilities. Further, the industry has experienced a shift to non-atomizing resin application methods that are required to comply with the HAP emission reduction requirements set forth in the 2001 NESHAP and which are included in the proposed rulemaking. This shift has occurred at all sizes of facilities across the U.S. because of the productivity and economic benefits of using non-atomizing methods over conventional atomizing methods.

The proposed rulemaking would provide flexibility by allowing compliance through averaging the VOC emission rates of open molding resin and gel coat materials in subsection (f)(2) in addition to choice of application technology. A third compliance option, the use of a VOC emissions capture system and add-on air pollution control device, is provided in subsection (f)(3). However, because of the wide availability and lower cost (compared to add-on controls) of compliant VOC content materials and alternative application methods, compliant materials and methods are generally used to reduce VOC emissions from fiberglass boat manufacturing facilities.

Emission limitations established by this proposed rulemaking would not require the submission of applications for amendments to existing operating permits. These requirements would be incorporated as applicable requirements at the time of permit renewal, if less than 3 years remain in the permit term.

New legal, accounting or consulting procedures would not be required.

Compliance Assistance Plan

The Department plans to educate and assist the public and regulated community in understanding the proposed requirements and how to comply with them. This would be accomplished through the Department's ongoing compliance assistance program. The Department would also work with the Small Business Assistance Program to aid the facilities less able to handle permitting matters with in-house staff.

Paperwork Requirements.

The owner and operator of an affected fiberglass boat manufacturing source would be required to keep records of information for open molding resin and gel coat materials and cleaning materials, as applicable, sufficient to demonstrate compliance with the requirements of this section. The proposed rulemaking would require monthly records of certain VOC content information or composite vapor pressure, as applicable. Records of calculations performed for each applicable requirement under subsections (f), (h) and (j), would be required, as well as records of the sampling and testing performed in accordance with subsection (n). The records required in the proposed rulemaking must be maintained for 2 years unless a longer period is specified by a plan approval or operating permit issued under Chapter 127 and submitted to the Department in an acceptable format upon receipt of a written request.

G. Pollution Prevention

The Pollution Prevention Act of 1990 (42 U.S.C.A. §§ 13101—13109) established a National policy that promotes pollution prevention as the preferred means for achieving state environmental protection goals. The Department encourages pollution prevention, which is the reduction or elimination of pollution at its source, through the substitution of environmentally friendly materials, more efficient use of raw materials and the incorporation of energy efficiency strategies. Pollution prevention practices can provide greater environmental protection with

greater efficiency because they can result in significant cost savings to facilities that permanently achieve or move beyond compliance.

This proposed rulemaking would help ensure that the citizens and the environment of this Commonwealth experience the benefits of reduced emissions of VOCs and HAPs from fiberglass boat manufacturing open molding resin, gel coat and cleaning materials. Although the proposed rulemaking is designed primarily to address ozone air quality, the reformulation or substitution of low-VOC content open molding resin and gel coat materials, and low-VOC content or low vapor pressure cleaning materials, to meet the VOC content limits applicable to users may also result in reduction of HAP emissions, which are also a serious health threat. The reduced levels of high VOC- and HAP-content solvents would also benefit water quality through reduced loading on water treatment plants and in reduced quantities of high VOC- and HAP-content solvents leaching into the ground.

The proposed rulemaking provides as one compliance option that open molding resin and gel coat used in fiberglass boat manufacturing processes in this Commonwealth would meet specified limits for VOC content, usually through substitution of low VOC-content solvents or water for the high VOC-content solvents, and that they be applied using specified application methods. Further, the proposed rulemaking would require the owner and operator of a source subject to this section to ensure that resin and gel coat containers with a capacity equal to or greater than 55 gallons (208 liters), including those used for on-site mixing of putties and polyputties, have a cover in place at all times with no visible gaps, except when materials are being manually added or removed from a container or when mixing equipment is being placed in or removed from a container.

The proposed rulemaking additionally requires the use of low-VOC content or low vapor pressure cleaning materials, and work practice standards for the storage and handling of cleaning materials. The proposed rulemaking would also require the owner and operator of a source subject to this section to ensure that the VOC content of cleaning materials used for routine application equipment cleaning is equal to or less than 5% by weight or has a composite vapor pressure equal to or less than 0.50 mmHg at 68°F and use only non-VOC-containing solvent to remove cured resin or gel coat residue from application equipment.

H. Sunset Review

This regulation will be reviewed in accordance with the sunset review schedule published by the Department to determine whether it effectively fulfills the goals for which it was intended.

I. Regulatory Review

Under section 5(a) of the Regulatory Review Act (71 P.S. § 745.5(a)), on July 8, 2014, the Department submitted a copy of the proposed rulemaking to the Legislative Reference Bureau for publication in the *Pennsylvania Bulletin* and to the Independent Regulatory Review Commission (IRRC) and the Chairpersons of the House and Senate Environmental Resources and Energy Committees. In addition to submitting the proposed rulemaking, the Department has provided IRRC and the House and Senate Committees with a copy of a detailed regulatory

analysis form prepared by the Department. A copy of this material is available to the public upon request.

Under section 5(g) of the Regulatory Review Act, IRRC may convey any comments, recommendations or objections to the proposed rulemaking within 30 days of the close of the public comment period. The comments, recommendations or objections shall specify the regulatory review criteria which have not been met. The Regulatory Review Act specifies detailed procedures for review, prior to final publication of the rulemaking, by the Department, the General Assembly and the Governor of comments, recommendations or objections raised.

J. Public Comments

Interested persons are invited to submit written comments, suggestions or objections regarding the proposed rulemaking to the Environmental Quality Board. Comments, suggestions or objections must be received by the Board by September 22, 2014. In addition to the submission of comments, interested persons may also submit a summary of their comments to the Board. The summary may not exceed one page in length and must also be received by the Board by September 22, 2014. The one-page summary will be distributed to the Board and available publicly prior to the meeting when the final rulemaking will be considered.

Comments including the submission of a one-page summary of comments may be submitted to the Board online, by email, by mail or express mail as follows. Please note, if an acknowledgement of comments submitted online or by email is not received by the sender within 2 working days, the comments should be retransmitted to the Board to ensure receipt. Comments submitted by facsimile will not be accepted.

Online: Comments may be submitted to the Board by accessing the Board's online comment system at <http://www.ahs.dep.pa.gov/RegComments>.

Email: Comments may be submitted to the Board by email at RegComments@pa.gov. A subject heading of the proposed rulemaking and a return name and address must be included in each transmission.

Mail: Environmental Quality Board
P.O. Box 8477
Harrisburg, PA 17105-8477

Express Mail: Environmental Quality Board
Rachel Carson State Office Building
16th Floor
400 Market Street
Harrisburg, PA 17101-2301

K. Public Hearings

The Board will hold three public hearings for the purpose of accepting comments on this proposed rulemaking. The hearings will be held at 1:00 p.m. on the following dates:

August 19, 2014
1:00 p.m. Department of Environmental Protection
Southwest Regional Office
Island Conference Room
400 Waterfront Drive
Pittsburgh, PA 15222

August 20, 2014
1:00 p.m. Department of Environmental Protection
Southeast Regional Office
Schuylkill Conference Room
2 East Main Street
Norristown, PA 19401

August 21, 2014
1:00 p.m. Department of Environmental Protection
Rachel Carson State Office Building
Conference Room 105
400 Market Street
Harrisburg, PA 17105

Persons wishing to present testimony at a hearing are requested to contact the Environmental Quality Board, P.O. Box 8477, Harrisburg, PA 17105-8477, (717) 787-4526 at least 1 week in advance of the hearing to reserve a time to present testimony. Oral testimony is limited to 10 minutes for each witness. Witnesses are requested to submit three written copies of their oral testimony to the hearing chairperson at the hearing. Organizations are limited to designating one witness to present testimony on their behalf at each hearing.

Persons in need of accommodations as provided for in the Americans with Disabilities Act of 1990 should contact the Board at (717) 787-4526 or through the Pennsylvania AT&T Relay Service at (800) 654-5984 (TDD) or (800) 654-5988 (voice users) to discuss how the Board may accommodate their needs.

By:

E. Christopher Abruzzo
Chairman

PROPOSED RULEMAKING
Annex A
TITLE 25. ENVIRONMENTAL PROTECTION
PART I. DEPARTMENT OF ENVIRONMENTAL PROTECTION
SUBPART C. PROTECTION OF NATURAL RESOURCES
ARTICLE III. AIR RESOURCES

CHAPTER 129. STANDARDS FOR SOURCES
SOURCES OF VOCs

(Editor's note: Section 129.74 is new and printed in regular type to enhance readability.)

§ 129.74. Control of VOC emissions from fiberglass boat manufacturing materials.

(a) Applicability.

(1) This section applies to the owner and operator of a facility that manufactures a hull or a deck of a boat or a related part from fiberglass, builds a mold or plug to make a fiberglass boat hull or deck or related part or makes polyester resin putties for assembling fiberglass boat parts, when the total actual VOC emissions from fiberglass boat manufacturing operations identified in Table I are equal to or greater than 15 pounds (6.8 kilograms) per day or 2.7 tons per 12-month rolling period, before consideration of controls. The total actual VOC emissions include the actual VOC emissions from the manufacture of hulls or decks from fiberglass, fiberglass boat parts (including small parts such as hatches, seats and lockers), molds or plugs for fiberglass hulls, decks or boat parts, resin and gel coat mixing operations, resin and gel coat application equipment and related cleaning activities at the facility.

(2) This section does not apply to the owner and operator of a facility that manufactures boat trailers or parts of boats, such as hatches, seats and lockers, but does not manufacture hulls or decks of boats from fiberglass or build molds to make fiberglass boat hulls or decks.

**Table I: Compliant Monomer VOC Content Limit
for Open Molding Resin and Gel Coat Materials**

Open Molding Resin or Gel Coat Material	Application Method	Individual Monomer VOC Content or Weighted Average Monomer VOC Content (weight percent)
Production Resin	Atomized Spray	28
Production Resin	Non-atomized	35
Pigmented Gel Coat	Any Method	33
Clear Gel Coat	Any Method	48
Tooling Resin	Atomized Spray	30
Tooling Resin	Non-atomized	39
Tooling Gel Coat	Any Method	40

(b) *Definitions.* The following words and terms, when used in this section, have the following meanings unless the context clearly indicates otherwise:

Application equipment cleaning—The process of flushing or removing resin or gel coat material, or both, from the interior or exterior of equipment that is used to apply resins or gel coats in the manufacture of fiberglass parts.

Assembly adhesives—A chemical substance that is applied for the purpose of bonding two surfaces together other than by mechanical means.

Atomized application method—A resin application technology in which the resin leaves the application equipment and breaks into droplets or an aerosol as it travels from the application equipment to the surface of the part. The term includes resin spray guns and resin chopper spray guns.

Boat—A vessel, other than a seaplane, that can be used for transportation on the water.

Clear gel coat—A polyester resin material that is clear or translucent so that underlying colors are visible. These materials are used to manufacture parts for sale. The term does not include tooling gel coats used to build or repair molds.

Closed molding—A process in which pressure is used to distribute resin through the reinforcing fabric placed between two mold surfaces to either saturate the fabric or fill the mold cavity. The pressure may be clamping pressure, fluid pressure, atmospheric pressure or vacuum pressure used either alone or in combination. The mold surfaces may be rigid or flexible.

(i) The term includes compression molding with sheet molding compound, infusion molding, resin injection molding (RIM), vacuum assisted resin transfer molding (VARTM), resin transfer molding and vacuum assisted compression molding.

(ii) The term does not include the following:

(A) A process in which a closed mold is used only to compact saturated fabric or remove air or excess resin from the fabric, such as in vacuum bagging.

(B) Open molding steps, such as application of a gel coat or skin coat layer by conventional open molding.

Cured resin—A thermosetting plastic material containing styrene or methyl methacrylate or gel coat that has changed irreversibly from a liquid to a solid.

Fiberglass—A material consisting of glass fibers made in the form of cloth, mat or roving.

Fiberglass boat—A vessel in which either the hull or deck, or both, is built from a composite material consisting of a thermosetting resin matrix reinforced with fibers of glass, carbon, aramid or other material.

Filled resin—A thermosetting plastic material to which an inert material has been added to change viscosity, density, shrinkage or other physical properties, particularly for building molds.

Flowcoater—A non-atomizing application method of applying resins and gel coats to an open mold with a fluid nozzle in a fan pattern with no air supplied to the nozzle.

Gel coat—A clear or pigmented polyester resin material that does not contain reinforcing fibers and becomes the outer or inner surface of a finished boat product or mold. The term includes a clear or pigmented polyester resin mixed with metal flakes.

Glass cloth—A fabric made of woven yarns of glass fibers.

Glass mat—A prepared material consisting of short glass fibers that are fixed to each other in a random pattern by a chemical binder or are mechanically stitched to a lightweight fabric.

Glass roving—A bundle of continuous glass fibers that is fed from a spool to a specialized gun that chops the bundle into short fibers, mixes the fibers with catalyzed resin and deposits the mixture on the mold surface in a random pattern.

Mixing—An operation in which resin or gel coat, including the mixing of putties or polyester resin putties, is combined with additives that include fillers, promoters or catalysts.

Mold—The cavity or surface into or on which gel coat, resin and fibers are placed and from which finished fiberglass parts take their form. The term is also known as a tool.

Monomer VOC—A volatile organic compound that partially combines with itself or other similar compounds by a cross-linking reaction to become a part of the cured resin.

Monomer VOC content—The weight of the monomer divided by the weight of the polymer.

Non-atomized application method—A resin application technology in which the resin is not broken into droplets or into an aerosol as the resin travels from the application equipment to the surface of the part. The term includes flowcoaters, chopper flowcoaters, pressure-fed resin rollers, resin impregnators and hand application (for example, paint brush or paint roller).

Open molding—A process in which the reinforcing fibers and resin are placed in the mold and are open to the surrounding air while the reinforcing fibers are saturated with resin. The term includes the following:

(i) An operation in which a vacuum bag or similar cover is used to compress an uncured laminate to remove air bubbles or excess resin or to achieve a bond between a core material and a laminate.

(ii) Application of a gel coat or skin coat layer prior to a closed molding process.

(iii) A process in which a closed mold is used only to compact saturated fabric or to remove air or excess resin from the fabric (such as in vacuum bagging).

Pigmented gel coat—An opaque polyester resin material used to manufacture parts for sale. The term does not include tooling gel coats used to build or repair molds.

Polyester resin material—An unsaturated thermosetting plastic material, such as an isophthalic, orthophthalic, halogenated, bisphenol A, vinylester or furan resin, a cross-linking agent, a catalyst, a gel coat, an inhibitor, an accelerator, a promoter or other material containing VOC used in polyester resin operations.

Polyester resin operation—A process in which an unsaturated polyester resin material is used to fabricate, rework, repair or touch-up a product for commercial, military or industrial use by mixing, pouring, hand laying-up, impregnating, injecting, forming, winding, spraying or curing.

Polyputty or putty—A polyester or vinylester resin mixed with inert fillers or fibers. The mixture is used to assemble fiberglass parts and to fill gaps between parts. The applied material becomes part of the composite structure. These materials are not considered industrial adhesives.

Plug—A full-size model of the part to be manufactured. The mold is built over the finished model. The term is also known as a prototype.

Production resin—A thermosetting plastic material used to manufacture parts for sale. The term does not include tooling resins used to build or repair molds and assembly adhesives.

Repair—The addition of polyester resin material to a portion of a previously fabricated product to mend damage.

Resin—A thermosetting plastic material containing styrene or methyl methacrylate, with or without pigment, used to encapsulate and bind together reinforcement fibers in the construction of fiberglass parts.

Resin impregnator—A mechanical non-atomizing composite material application method in which fiber reinforcement is saturated with one or more resins in a controlled ratio for each specific composite product.

Roll-out—The process of using rollers, squeegees or similar tools to compact reinforcing materials saturated with resin to remove trapped air or excess resin.

Skin coat—A layer of resin and fibers applied over the gel coat to protect the gel coat from being deformed by the next laminate layer.

Tooling gel coat—A polyester resin material containing styrene or methyl methacrylate, or both, that becomes the interior surface of a mold, supported by resin and fiberglass, or the exterior surface of a plug used to create a mold or is used to repair a mold.

Tooling resin—A thermosetting plastic material, hardened by a catalyst, used to construct or repair a mold or a plug for a mold for the manufacture of a fiberglass boat hull, deck or other part.

Touch-up—The application of material to cover minor imperfections.

Vacuum bagging—A molding technique in which the reinforcing fabric is saturated with resin, covered with a flexible sheet that is sealed to the edge of the mold and a vacuum is applied under the sheet to compress the laminate, remove excess resin or remove trapped air from the laminate during curing. The term does not include a process that meets the definition of closed molding.

Vacuum bagging with roll-out—A partially closed molding technology that rolls the resin and fabric before the application of vacuum bagging materials.

Vacuum bagging without roll-out—A partially closed molding technology that applies vacuum bagging materials to the mold immediately after resin application without rolling the resin and fabric.

Vinylester resin—A thermosetting plastic material containing one or more esters of acrylic or methacrylic acids and having double-bond and ester linkage sites only at the ends of the resin molecules.

(c) *Exceptions.* The requirements of this section do not apply to the following circumstances:

- (1) A resin application process in a closed molding operation as defined in subsection (b).
- (2) A surface coating applied to a fiberglass boat.
- (3) A surface coating for a fiberglass and metal recreational boat.
- (4) An industrial adhesive used in the assembly of a fiberglass boat. Industrial adhesives used in fiberglass boat assembly are regulated under § 129.77 (relating to control of emissions from the use or application of adhesives, sealants, primers and solvents) or Chapter 130, Subchapter D (relating to adhesives, sealants, primers and solvents).

(d) *Existing RACT permit.* The requirements of this section supersede the requirements of a RACT permit issued to the owner and operator of a source subject to subsection (a) prior to _____ (*Editor's Note:* The blank refers to the date of adoption of this proposed rulemaking.), under §§ 129.91—129.95 (relating to stationary sources of NO_x and VOCs) to control, reduce or minimize VOCs from a fiberglass boat manufacturing process, except to the extent the RACT permit contains more stringent requirements.

(e) *Compliance deadline.* The owner and operator of a facility subject to this section shall comply with the applicable requirements beginning _____ (*Editor's Note:* The blank refers to the effective date of adoption of this proposed rulemaking.).

(f) *Emission limits.* Except as specified in subsection (h) or (j), the owner and operator of a facility subject to this section may not cause or permit the emission into the outdoor atmosphere of monomer VOCs from an open molding resin or gel coat fiberglass boat manufacturing operation, a resin or gel coat mixing operation or a resin or gel coat application equipment cleaning operation unless one or more of the following limitations is met:

(1) *Compliant materials option.* The individual monomer VOC content limit is achieved through the use of low-monomer VOC content open molding resin and gel coat materials by one or more of the following methods:

(i) Using only low-monomer VOC content resin and gel coat materials within a covered operation listed in Table I.

(A) The monomer VOC content of each resin or gel coat material is equal to or less than the limit specified in Table I.

(B) The monomer VOC content of each resin or gel coat material includes the amount of non-monomer VOC content that exceeds 5% by weight of the resin or gel coat material.

(ii) Averaging the monomer VOC contents for the open molding resin and gel coat materials used within a covered operation listed in Table I on a weight-adjusted basis.

(A) The combined total monomer VOC content of resin or gel coat materials of a certain type must meet the applicable monomer VOC content limit for a specific application method on a 12-month rolling weighted-average basis, calculated using the equation in clause (C).

(B) The monomer VOC content of each resin or gel coat material included in the weighted average specified in clause (A) includes the amount of non-monomer VOC content that exceeds 5% by weight of the resin or gel coat material.

(C) The weighted-average monomer VOC content on a 12-month rolling-average basis shall be calculated as follows:

$$\text{Weighted Average Monomer VOC Content} = \frac{\sum_{i=1}^n (M_i \text{VOC}_i)}{\sum_{i=1}^n (M_i)}$$

Where:

M_i = Mass of open molding resin or gel coat i used in the past 12 months in an operation, in megagrams.

VOC_i = Monomer VOC content, by weight percent, of open molding resin or gel coat i used in the past 12 months in an operation.

n = Number of different open molding resins or gel coats used in the past 12 months in an operation.

(2) *Emissions averaging option.* The numerical monomer VOC emission rate limit is achieved through averaging emissions among different open molding resin and gel coat operations. The equations in subparagraphs (iii), (iv) and (v) must be used to estimate the monomer VOC emission rates from each operation included in the emissions averaging option based on the material and application method.

(i) The monomer VOC content of each open molding resin or gel coat material included in the emissions averaging option includes the amount of non-monomer VOC content that exceeds 5% by weight of the resin or gel coat material.

(ii) The 12-month rolling emissions average shall be determined at the end of each calendar month.

(iii) The facility-specific monomer VOC mass emission limit on a 12-month rolling-average basis shall be calculated as follows:

$$\text{Monomer VOC Limit} = 46(M_R) + 159(M_{PG}) + 291(M_{CG}) + 54(M_{TR}) + 214(M_{TG})$$

Where:

Monomer VOC Limit = Total allowable monomer VOC that can be emitted from the open molding operations included in the emissions averaging program, in kilograms per 12-month period.

M_R = Mass of production resin used in the past 12 months, excluding exempt VOC materials, in megagrams.

M_{PG} = Mass of pigmented gel coat used in the past 12 months, excluding exempt VOC materials, in megagrams.

M_{CG} = Mass of clear gel coat used in the past 12 months, excluding exempt VOC materials, in megagrams.

M_{TR} = Mass of tooling resin used in the past 12 months, excluding exempt VOC materials, in megagrams.

M_{TG} = Mass of tooling gel coat used in the past 12 months, excluding exempt VOC materials, in megagrams.

Numerical coefficients = The allowable monomer VOC emission rate for that particular material, in units of kg/Mg of material used.

(iv) At the end of the first 12-month rolling-average emissions period and at the end of each subsequent calendar month, the owner or operator of the facility shall demonstrate that the monomer VOC emissions from the operations and materials included in the emissions averaging option do not exceed the emission limit calculated under subparagraph (iii) for the same 12-month period as follows:

$$\text{Monomer VOC emissions} = (PV_R)(M_R) + (PV_{PG})(M_{PG}) + (PV_{CG})(M_{CG}) + (PV_{TR})(M_{TR}) + (PV_{TG})(M_{TG})$$

Where:

Monomer VOC emissions = Monomer VOC emissions calculated using the monomer VOC emission equation for each operation included in the emissions averaging program, in kilograms.

PV_R = Weighted-average monomer VOC emission rate for production resin used in the past 12 months, in kilograms per megagram.

M_R = Mass of production resin used in the past 12 months, in megagrams.

PV_{PG} = Weighted-average monomer VOC emission rate for pigmented gel coat used in the past 12 months, in kilograms per megagram.

M_{PG} = Mass of pigmented gel coat used in the past 12 months, in megagrams.

PV_{CG} = Weighted-average monomer VOC emission rate for clear gel coat used in the past 12 months, in kilograms per megagram.

M_{CG} = Mass of clear gel coat used in the past 12 months, in megagrams.

PV_{TR} = Weighted-average monomer VOC emission rate for tooling resin used in the past 12 months, in kilograms per megagram.

M_{TR} = Mass of tooling resin used in the past 12 months, in megagrams.

PV_{TG} = Weighted-average monomer VOC emission rate for tooling gel coat used in the past 12 months, in kilograms per megagram.

M_{TG} = Mass of tooling gel coat used in the past 12 months, in megagrams.

(v) For purposes of subparagraph (iv), the owner or operator of the facility shall determine the weighted-average monomer VOC emission rate for the previous 12 months for each open molding resin and gel coat operation included in the emissions averaging option as follows:

$$PV_{OP} = \frac{\sum_{i=1}^n (M_i PV_i)}{\sum_{i=1}^n (M_i)}$$

Where:

PV_{OP} = Weighted-average monomer VOC emission rate for each open molding operation ($PV_R, PV_{PG}, PV_{CG}, PV_{TR}, PV_{TG}$) included in the emissions averaging program, in kilograms of monomer VOC per megagram of material applied.

M_i = Mass of resin or gel coat used within an operation in the past 12 months, in megagrams.

n = Number of different open molding resins and gel coats used within an operation within the past 12 months.

PV_i = The monomer VOC emission rate for resin or gel coat used within an operation in the past 12 months, in kilograms of monomer VOC per megagram of material applied. PV_i shall be calculated using the applicable emission rate formula specified in Table II.

Table II: Monomer VOC Emission Rate Formulas for Open Molding Resin and Gel Coat Materials

Open Molding Resin or Gel Coat Material	Application Method	Emission Rate Formula
Production Resin, Tooling Resin	Atomized	$0.014 \times (\text{Resin VOC}\%)^{2.425}$
Production Resin, Tooling Resin	Atomized, plus vacuum bagging with roll-out	$0.01185 \times (\text{Resin VOC}\%)^{2.425}$
Production Resin, Tooling Resin	Atomized, plus vacuum bagging without roll-out	$0.00945 \times (\text{Resin VOC}\%)^{2.425}$
Production Resin, Tooling Resin	Non-atomized	$0.014 \times (\text{Resin VOC}\%)^{2.275}$
Production Resin, Tooling Resin	Non-atomized, plus vacuum bagging with roll-out	$0.0110 \times (\text{Resin VOC}\%)^{2.275}$
Production Resin, Tooling Resin	Non-atomized, plus vacuum bagging without roll-out	$0.0076 \times (\text{Resin VOC}\%)^{2.275}$
Pigmented Gel Coat	All methods	$0.445 \times (\text{Resin VOC}\%)^{1.675}$
Clear Gel Coat	All methods	$0.445 \times (\text{Resin VOC}\%)^{1.675}$
Tooling Gel Coat	All methods	$0.445 \times (\text{Resin VOC}\%)^{1.675}$

(3) *VOC emissions capture system and add-on air pollution control device option.* A numerical monomer VOC emission rate, determined for a facility based on the mix of application methods and materials used at the facility, is achieved through the use of a VOC emissions capture system and add-on air pollution control device.

(i) The equation in paragraph (2)(iii) must be used to determine the emission limit to be achieved by the add-on air pollution control device, but modified as specified in this subparagraph. The mass of each open molding monomer VOC-containing material used during the control device performance test must be used in the equation in paragraph (2)(iii), instead of the mass of each material used over the past 12 months, to determine the emission limit, in kilograms of monomer VOC, that is applicable during the control device test.

(ii) The measured emissions at the outlet of the control device, in kilograms of monomer VOC, must be less than the emission limit calculated as specified in subparagraph (i).

(iii) The relevant control device and emission capture system operating parameters must be monitored and recorded during the test.

(iv) The values of the parameters recorded in subparagraph (iii) must be used to establish the operating limits for those parameters.

(v) The operating parameters must be maintained within the established operating limits.

(g) *VOC emissions capture system and add-on air pollution control device requirements.* The owner or operator of a facility subject to this section may elect to comply with the applicable emission limitations of this section through the installation of a VOC emissions capture system and add-on air pollution control device in accordance with the requirements of subsection (f)(3). The owner or operator shall submit a plan approval to the appropriate regional office. The plan approval must be approved, in writing, by the Department prior to installation and operation of the emissions capture system and add-on air pollution control device. The plan approval must include the following information:

(1) A description, including location, of each affected source or operation to be controlled with the emissions capture system and add-on air pollution control device.

(2) A description of the proposed emissions capture system and add-on air pollution control device to be installed.

(3) A description of the proposed compliance monitoring equipment to be installed.

(4) A description of the parameters to be monitored to demonstrate continuing compliance.

(5) A description of the records to be kept that will document the continuing compliance.

(6) A schedule containing proposed interim dates for completing each phase of the required work to install and test the emissions capture system and add-on air pollution control device described in paragraph (2) and the compliance monitoring equipment described in paragraph (3).

(7) A proposed interim emission limitation that will be imposed on the affected source or operation until compliance is achieved with the applicable emission limitation.

(8) A proposed final compliance date that is as soon as possible but not later than 1 year after the start of installation of the approved emissions capture system and add-on air pollution control device and the compliance monitoring equipment.

(h) *Emission limits for filled production resins and filled tooling resins.* The owner or operator may use an open molding filled production resin or filled tooling resin in each of the emission limit options specified in subsection (f).

(1) If fillers are added to the resin material, the adjusted monomer VOC emission rate of the filled material must be calculated on an as-applied basis as follows:

$$PV_F = PV_U \times \frac{(100 - \% \text{ Filler})}{100}$$

Where:

PV_F = The as-applied monomer VOC emission rate for the filled production resin or tooling resin, in kilograms per megagram of filled material.

PV_U = The monomer VOC emission rate for the neat (unfilled) resin, before filler is added, calculated using the applicable emission rate formula in Table II.

% Filler = The weight-percent of filler in the as-applied resin system.

(2) The value of PV_F of a compliant material used in subsection (f)(1), calculated as specified in paragraph (1), for a filled resin used as a:

(i) Production resin shall not exceed 46 kilograms of monomer VOC per megagram of filled resin applied.

(ii) Tooling resin shall not exceed 54 kilograms of monomer VOC per megagram of filled resin applied.

(3) The value of PV_F , calculated as specified in paragraph (1), must be used in place of the value of PV_i for a filled resin included in the emissions averaging option equation in subsection (f)(2)(v).

(4) The monomer VOC content of each as applied filled resin includes the amount of non-monomer VOC content that exceeds 5% by weight of the unfilled resin material.

(i) *Monomer VOC control requirement for an open molding resin, gel coat, filled production resin or filled tooling resin not included in an emissions averaging option.* The monomer VOC content of an open molding resin, gel coat, filled production resin or filled tooling resin material not included in an emissions averaging option in subsection (f)(2) shall meet the monomer VOC content requirements of subsection (f)(1) or the add-on air pollution control requirements of subsection (f)(3).

(j) *Alternative requirements for control of monomer VOC content for certain resin and gel coat materials.* The monomer VOC content limits in Table I do not apply to a tooling or production material used for the following purposes:

(1) A production resin, including a skin coat resin, that must meet a specification for use in a military vessel or must be approved by the U.S. Coast Guard for use in the construction of a lifeboat, rescue boat or life-saving appliance approved under 46 CFR, chapter 1, subchapter Q (relating to equipment, construction, and materials; specifications and approval) or the construction of a small passenger vessel regulated by 46 CFR, chapter 1, subchapter T (relating to small passenger vessels (under 100 gross tons)). A production resin that meets one or more of these criteria must be applied with non-atomizing resin application equipment.

(2) A production or tooling resin or a pigmented, clear or tooling gel coat, used for repair and touch up of a part or a mold, if the weight used of resin and gel coat materials that meet one or more of these criteria does not exceed 1% by weight of the total resin and gel coat material used at a facility on a 12-month rolling-average basis.

(3) Pure 100% vinylester resin used for a skin coat, if the pure 100% vinylester resin used for the skin coat is applied with non-atomizing resin application equipment, and the weight used of resin materials meeting this criterion does not exceed 5% by weight of the total resin used at a facility on a 12-month rolling-average basis.

(k) *Work practices for resin and gel coat materials.* The owner or operator of a facility subject to this section shall ensure that resin and gel coat containers with a capacity equal to or greater than 55 gallons (208 liters), including those used for on-site mixing of putties and polyputties, have a cover in place at all times with no visible gaps, except when materials are being manually added or removed from a container or when mixing equipment is being placed in or removed from a container.

(l) *VOC content limits and work practices for cleaning materials.* The owner or operator of a facility subject to this section shall comply with the following VOC content limits and work practices for VOC-containing cleaning materials:

(1) Ensure that the VOC content of cleaning solvents used for routine application equipment cleaning is equal to or less than 5% by weight or has a composite vapor pressure equal to or less than 0.50 mmHg at 68°F.

(2) Use only non-VOC-containing solvent to remove cured resin or gel coat from application equipment.

(m) *Compliance and monitoring requirements.* The owner or operator of a facility subject to this section shall comply with the following requirements:

(1) Use the test methods and procedures in subsection (n) to determine the monomer VOC content of resin and gel coat material.

(2) Equip add-on air pollution control devices with the applicable monitoring equipment. The monitoring equipment shall be installed, calibrated, operated and maintained according to manufacturer's specifications at all times that the add-on air pollution control device is in use.

(n) *Sampling and testing.* The owner or operator of a facility subject to this section shall perform sampling and testing as follows:

(1) Use one or more of the following methods to determine the monomer VOC content of a resin or gel coat.

(i) SCAQMD Method 312-91, *Determination of Percent Monomer in Polyester Resins.*

(ii) Manufacturer's formulation data.

(iii) Other test methods or data demonstrated to provide results that are acceptable for purposes of determining compliance with this section if prior approval is obtained in writing from the Department and the EPA.

(2) Use the test methods and procedures specified in Chapter 139 (relating to sampling and testing) for sampling and testing of add-on air pollution control devices.

(o) *Recordkeeping requirements.* The owner or operator of a facility subject to this section shall maintain monthly records sufficient to demonstrate compliance with this section. The records shall include the following information:

(1) The name and identification number of each resin and gel coat.

(2) The total quantity of atomized molding production resin, non-atomized production resin, pigmented gel coat, clear gel coat, atomized tooling resin, non-atomized tooling resin and tooling gel coat used per month.

(3) The monomer VOC content for each resin and gel coat.

(4) The non-monomer VOC content for each resin and gel coat.

(5) The calculations performed for each applicable requirement under subsections (f), (h) and (j).

(6) The name and identification number only for each resin used in accordance with subsection (j)(1). The records specified in paragraphs (1)—(5) do not apply to resins used in accordance with subsection (j)(1).

(7) The name, identification number and VOC content or composite vapor pressure for each cleaning solvent used for routine application equipment cleaning.

(8) The information required by the plan approval issued under subsection (g), as applicable.

(9) The results of sampling and testing performed in accordance with subsection (n).

(p) *Reporting requirements.* The records shall be maintained for 2 years, unless a longer period is required by an order issued by the Department or a plan approval or operating permit issued under Chapter 127 (relating to construction, modification, reactivation and operation of sources). The records shall be submitted to the Department in an acceptable format upon receipt of a written request.

July 8, 2014

David Sumner
Executive Director
Independent Regulatory Review Commission
333 Market Street, 14th Floor
Harrisburg, PA 17120

Re: Proposed Rulemaking: Control of VOC Emissions from Fiberglass Boat Manufacturing Materials (#7-487)

Dear Mr. Sumner:

Pursuant to Section 5(a) of the Regulatory Review Act, please find enclosed a copy of a proposed regulation for review and comment by the Independent Regulatory Review Commission (Commission). This proposal is scheduled for publication in the *Pennsylvania Bulletin* on July 19, 2014, with a 60-day public comment period. The Environmental Quality Board (Board) adopted this proposal on May 21, 2014.

The enclosed proposed rulemaking would establish the volatile organic compound (VOC) emission limitations and other requirements of the United States Environmental Protection Agency (EPA) 2008 Fiberglass Boat Manufacturing Materials Control Technique Guidelines (CTG) for these sources in Pennsylvania. The VOC emission reduction measures included in the 2008 Fiberglass Boat Manufacturing Materials CTG and in the proposed rulemaking are based on the hazardous air pollutant (HAP) emission reduction measures of the 2001 National Emission Standards for Hazardous Air Pollutants (2001 NESHAP) for Boat Manufacturing. These measures are reasonably necessary to attain and maintain the health and welfare-based 8-hour ozone National Ambient Air Quality Standards (NAAQS) and to satisfy related Clean Air Act (CAA) requirements in Pennsylvania.

The proposed rulemaking would add § 129.74 (relating to control of VOC emissions from fiberglass boat manufacturing materials) to adopt reasonably available control technology (RACT) requirements and RACT emission limitations for stationary sources of VOC emissions from fiberglass boat manufacturing materials including open molding resin, gel coat and cleaning materials. Terms and definitions would be added to § 129.74 to support the interpretation of the proposed measures.

Upon finalization of this rulemaking, a revision to the Commonwealth's State Implementation Plan (SIP) will be submitted to the EPA.

July 8, 2014

This proposed rulemaking would apply to owners and operators of fiberglass boat manufacturing facilities. The Department of Environmental Protection (Department) is currently aware of one Title V facility in Pennsylvania that would be subject to the proposed requirements. The facility is a major source of HAP regulated under the 2001 NESHAP for Boat Manufacturing. The Department believes that no additional VOC emission reductions would be achieved at this facility due to compliance with the 2001 NESHAP for this sector. Therefore, there would be no additional costs to the owner and operator of this source by demonstrating compliance with this rulemaking. If there are other owners and operators of other fiberglass boat manufacturing facilities that have not yet been identified by the Department, they would likely incur little, if any, cost to implement the proposed requirements. Compliant materials are readily available to the owners and operators of all sizes of facilities and are widely used in the industry.

The Department discussed the draft proposed rulemaking with the Air Quality Technical Advisory Committee (AQTAC) on December 12, 2013. AQTAC voted unanimously to concur with the Department's recommendation to move the proposal forward to the Board for consideration as a proposed rulemaking. In addition, the proposed amendments were discussed with the Citizens Advisory Council (CAC) Policy and Regulatory Oversight Committee on March 12, 2014. The CAC voted, on March 18, 2014, recommending the proposed rulemaking to be considered by the Board. The draft proposed rulemaking was also discussed with the Small Business Compliance Advisory Committee (SBCAC) on April 23, 2014, and the SBCAC also voted to recommend the proposed rulemaking be considered by the Board.

The Department will provide the Commission with the assistance required to facilitate a thorough review of this proposal. Section 5(g) of the Regulatory Review Act provides that the Commission may, within 30 days of the close of the comment period, convey to the agency its comments, recommendations and objections to the proposed regulation. The Department will consider any comments, recommendations or suggestions made by the Commission, as well as the Committees and public commentators, prior to final adoption of this rulemaking.

Please contact me by e-mail at ledinger@pa.gov or by telephone at 717.783.8727 if you have any questions or need additional information.

Sincerely,



Laura Edinger
Regulatory Coordinator

Enclosures



**TRANSMITTAL SHEET FOR REGULATIONS SUBJECT TO
 THE REGULATORY REVIEW ACT**

I.D. NUMBER: 7-487 Control of VOC Emissions From Fiberglass Boat
 SUBJECT: Manufacturing materials
 AGENCY: DEPARTMENT OF ENVIRONMENTAL PROTECTION

TYPE OF REGULATION

- Proposed Regulation
- Final Regulation
- Final Regulation with Notice of Proposed Rulemaking Omitted
- 120-day Emergency Certification of the Attorney General
- 120-day Emergency Certification of the Governor
- Delivery of Tolled Regulation
 - a. With Revisions
 - b. Without Revisions

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 IRRC
 2014 JUL -8 PM 4:01

FILING OF REGULATION

DATE	SIGNATURE	DESIGNATION
7-8-14		Majority Chair, HOUSE COMMITTEE ON ENVIRONMENTAL RESOURCES & ENERGY Rep. Ron Miller
7-8-14		Minority Chair, HOUSE COMMITTEE ON ENVIRONMENTAL RESOURCES & ENERGY Rep. Greg Vitali
7-8-14		Majority Chair, SENATE COMMITTEE ON ENVIRONMENTAL RESOURCES & ENERGY Senator Gene Yaw
7-8-14		Minority Chair, SENATE COMMITTEE ON ENVIRONMENTAL RESOURCES & ENERGY Senator John Yudichak
7/8/14		INDEPENDENT REGULATORY REVIEW COMMISSION
		ATTORNEY GENERAL (for Final Omitted only)
7/8/14		LEGISLATIVE REFERENCE BUREAU (for Proposed only)

