

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

Control of Volatile Organic Compound Emissions from Miscellaneous Metal Parts Surface Coating Processes, Miscellaneous Plastic Parts Surface Coating Processes and Pleasure Craft Surface Coatings

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 add § 129.52d (relating to control of VOC emissions from miscellaneous metal parts surface coating processes, miscellaneous plastic parts surface coating processes and pleasure craft surface coatings) to adopt reasonably available control technology (RACT) requirements and RACT emission limitations for stationary sources of volatile organic compound (VOC) emissions from miscellaneous metal parts surface coating processes and miscellaneous plastic parts surface coating processes. These processes include surface coating of automotive and transportation plastic parts, business machine plastic parts, pleasure craft, and bodies or body parts for new heavier vehicles, and surface coating performed on a separate coating line at an automobile and light-duty truck assembly coating facility on which coatings are applied to other parts intended for use in new automobiles or new light-duty trucks or to aftermarket repair or replacement parts for automobiles or light-duty trucks, as well as related cleaning activities. The proposed rulemaking would also add terms and definitions to § 129.52d to support the interpretation of the proposed measures and amend §§ 129.51, 129.52, 129.67 and 129.75 to support the addition of § 129.52d.

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 proposed rulemaking is given under Board order at its meeting of _____, 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 on the Department of Environmental Protection's (Department) web site at www.dep.state.pa.us ("Public Participation Center;" select "Environmental Quality Board").

C. Statutory Authority

The proposed rulemaking is authorized under section 5(a)(1) of the Air Pollution Control Act (act) (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 act 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 miscellaneous metal parts surface coating processes and miscellaneous plastic parts surface coating processes. These processes include surface coating of automotive and transportation plastic parts, business machine plastic parts, pleasure craft, and bodies or body parts for new heavier vehicles, and surface coating performed on a separate coating line at an automobile and light-duty truck assembly coating facility on which coatings are applied to other parts intended for use in new automobiles or new light-duty trucks or to aftermarket repair or replacement parts for automobiles or light-duty trucks, as well as related cleaning activities.

Miscellaneous metal parts and products and miscellaneous plastic parts and products include metal and plastic components of the following types of products as well as the products themselves: fabricated metal products, molded plastic parts, small and large farm machinery, commercial and industrial machinery and equipment, automotive or transportation equipment, interior or exterior automotive parts, construction equipment, motor vehicle accessories, bicycles and sporting goods, toys, recreational vehicles, pleasure craft (recreational boats), extruded aluminum structural components, railroad cars, heavier vehicles, lawn and garden equipment, business machines, laboratory and medical equipment, electronic equipment, steel drums, metal pipes, and numerous other industrial and household products.

VOCs are precursors for ground-level ozone formation. Ground-level ozone, a public health and welfare hazard, is not emitted directly to the atmosphere from these sources, 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 Miscellaneous Metal and Plastic Parts Coatings 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. Section 109 of the CAA (42 U.S.C.A. § 7409) established two types of NAAQS: primary standards, which are set

to protect public health; and secondary standards, which are 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 38856 (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 the ambient air monitoring 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 primary and secondary ozone 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 this Commonwealth as nonattainment for the 2008 ozone NAAQS. See 77 FR 30088, 30143 (May 21, 2012). These areas include all or a portion of Allegheny, Armstrong, Berks, Beaver, Bucks, Butler, Carbon, Chester, Delaware, Fayette, Lancaster, Lehigh, Montgomery, Northampton, Philadelphia, Washington and Westmoreland Counties. 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 RACT limits for VOC emissions from these miscellaneous metal parts surface coating processes and miscellaneous plastic parts surface coating processes. In 2004, however, the EPA promulgated 40 CFR Part 63, Subpart Mmmm and 40 CFR Part 63, Subpart Pppp (relating to National emission standards for hazardous air pollutants for surface coating of miscellaneous metal parts and products; and National emission standards for hazardous air pollutants for surface coating of plastic parts and products). See 69 FR 130

(January 2, 2004) and 69 FR 20968 (April 19, 2004). These are collectively referred to as the 2004 NESHAPs in this preamble. These 2004 NESHAPs established organic hazardous air pollutant (HAP) emission limits based on low-HAP-content coatings and low-volatile-emitting (non-atomizing) coating application technology for the respective surface coating categories.

When developing the control measure recommendations included in its 2008 Miscellaneous Metal and Plastic Parts Coatings CTG for reducing VOC emissions from these sources, the EPA took into account the HAP emission reduction measures of the 2004 NESHAPs for the metal parts and products and the plastic parts and products coating industries. Many HAPs are VOCs, but not all VOCs are HAPs. The requirements of the 2004 NESHAPs apply to "major sources" of HAP emissions from miscellaneous metal parts and products coating facilities and plastic parts and products coating facilities. 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) or more of any single listed HAP or 25 tpy or more of any combination of HAPs. See section 112(a)(1) of the CAA (42 U.S.C.A. § 7412(a)(1)). See 69 FR 130, 131 and 69 FR 20968, 20969. Most of the Federal recommendations for control of VOC emissions included in the 2008 Miscellaneous Metal and Plastic Parts Coatings CTG are based on the HAP content and emission rate limits for surface coating of miscellaneous metal parts and products and surface coating of plastic parts and products and other requirements in the 2004 NESHAPs for these categories.

For pleasure craft coatings, the EPA took into account California regulations when developing the CTG. California was the only state at that time with regulations governing VOC emissions from pleasure craft coatings. After the EPA finalized the CTG, the pleasure craft coatings industry asserted to the EPA that three of the VOC emission limits in the CTG were too low considering the performance requirements of the pleasure craft coatings and that the VOC emission limits recommended did not represent RACT for the National pleasure craft coatings industry. The industry suggested several options for revision. The EPA did not take action on the concerns, but left it up to the states to address the concerns. On June 1, 2010, the EPA issued a memorandum entitled, "Control Technique Guidelines for Miscellaneous Metal and Plastic Part Coatings – Industry Request for Reconsideration," in which the EPA stated that each state could determine what would be appropriate for the pleasure craft coatings industry in its jurisdiction.

State regulations to control VOC emissions from miscellaneous metal parts surface coating processes and miscellaneous plastic parts surface coating processes, as well as the related cleaning activities, are required under Federal law. The state regulations will be reviewed by the EPA and will be approved by the EPA if the provisions meet the RACT requirements of the CAA and its implementing regulations. See 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 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 RACT, for sources of emissions. Section 182(b)(2) of the CAA 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 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 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 miscellaneous metal products coatings and plastic parts coatings on its section 183(e) list and, in 2008, issued a CTG for these product categories. See 60 FR 15264, 15267 (March 23, 1995) and 73 FR 58481. See *Control Techniques Guidelines for Miscellaneous Metal and Plastic Parts Coatings*, EPA-453/R-08-003, Office of Air Quality Planning and Standards, EPA, September 2008. The 2008 Miscellaneous Metal and Plastic Parts Coatings CTG document is available on the EPA web site at www.epa.gov/airquality/ozonepollution/SIPToolkit/ctgs.html.

In the 2008 notice of final determination and availability of final CTGs, the EPA determined that the recommendations of the 2008 Miscellaneous Metal and Plastic Parts Coatings CTG would be substantially as effective as National regulations in reducing VOC emissions from the miscellaneous metal products coatings and plastic parts coatings product categories 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 Miscellaneous Metal and Plastic Parts Coatings CTG for their applicability to the ground-level ozone reduction measures necessary for this Commonwealth. The Bureau of Air Quality determined that the VOC emission reduction measures provided in the 2008 Miscellaneous Metal and Plastic Parts Coatings CTG are appropriate to be implemented in this Commonwealth as RACT for these categories. The Bureau of Air Quality determined that three VOC content limits applicable to the pleasure craft coatings industry should be altered slightly from the CTG to represent RACT for that industry, based on the June 1, 2010, memorandum from the EPA entitled, “Control Technique Guidelines for Miscellaneous Metal and Plastic Part Coatings – Industry Request for

Reconsideration.” The EPA wrote the memorandum in response to input from the pleasure craft coatings industry following the EPA’s publication of the CTG.

This proposed rulemaking would apply to the owner and operator of a facility that manufactures metal parts or products or plastic parts or products, including automotive and transportation plastic parts, business machine plastic parts, pleasure craft, or bodies or body parts for new heavier vehicles, on which subject surface coatings are applied by the owner and operator, as well as to the owner and operator of a facility that applies subject surface coatings to affected parts and products on a contractual basis. This proposed rulemaking would also apply to the owner and operator of a separate coating line at an automobile and light-duty truck assembly coating facility on which subject surface coatings are applied to other parts intended for use in new automobiles or new light-duty trucks or to aftermarket repair or replacement parts for automobiles or light-duty trucks.

The Board is aware of 160 manufacturing facilities in this Commonwealth whose owners and operators may be subject to the proposed VOC emission reduction measures. The owners and operators of as many as 139 of these facilities may emit 2.7 tons or more of actual VOC emissions per 12-month rolling period threshold, including related cleaning activities and before consideration of controls, and would likely be required to implement the proposed VOC emission control measures, work practice standards, and recordkeeping requirements. The owners and operators of the remaining 21 affected facilities with actual VOC emissions below the 2.7 tons per 12-month rolling period threshold, including related cleaning activities and before consideration of controls, would be subject only to the recordkeeping requirements and, if requested by the Department, reporting requirements of the proposed rulemaking. It is possible that the owners and operators of additional facilities that have not been identified could be subject to the proposed rulemaking control measures.

Implementation of the recommended control measures could generate reductions of as much as 1,586 tons of VOC emissions per 12-month rolling period from the 139 facilities. The estimated total maximum annual costs to the affected regulated industry could be up to \$2.8 million. The range of cost per regulated facility for implementing the proposed VOC emission control measures is estimated to be \$10,500 to \$20,000 per facility. The range of cost effectiveness to the regulated industry would be approximately \$920 per ton of VOC emissions reduced to \$1,758 per ton reduced on an annual basis.

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 sources of VOC emissions from surface coating processes subject to the proposed rulemaking, as well as the related cleaning activities. Adoption of VOC emission requirements for these sources 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 ground-level 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 ground-level 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 Air Quality Technical Advisory Committee and the Small Business Compliance Advisory Committee were briefed on the proposed rulemaking on February 20, 2014, and April 23, 2014, respectively. Both committees voted unanimously to concur with the Department's recommendation to move the proposed rulemaking forward to the Board for consideration. In addition, the proposed rulemaking was discussed with the Citizens Advisory Council (CAC) Policy and Regulatory Oversight Committee on March 12, 2014. On the recommendation of the Policy and Regulatory Oversight 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

§ 129.52d. Control of VOC emissions from miscellaneous metal parts surface coating processes, miscellaneous plastic parts surface coating processes and pleasure craft surface coatings.

Under proposed subsection (a)(1), the proposed rulemaking would apply Statewide to the owner and operator of a miscellaneous metal part surface coating process or miscellaneous plastic part surface coating process, or both, if the total actual VOC emissions from all miscellaneous metal part coating units and miscellaneous plastic part coating units, including related cleaning activities, at the facility are equal to or greater than 2.7 tons per 12-month rolling period, before consideration of controls. As with all RACT regulations, an owner or operator would remain subject to the regulation even if the throughput or VOC emissions fall below the applicability threshold.

Proposed subsection (a)(2) specifies that the proposed rulemaking would apply Statewide to the owner and operator of a miscellaneous metal part surface coating process or miscellaneous plastic part surface coating process, or both, if the total actual VOC emissions from all miscellaneous metal part coating units and miscellaneous plastic part coating units, including related cleaning activities, at the facility are below 2.7 tons per 12-month rolling period, before consideration of controls. The only requirements that would apply to an owner or operator subject to subsection (a)(2) would be recordkeeping requirements and, if requested by the Department, reporting requirements.

Proposed subsection (a)(3) specifies that compliance with the VOC emission limits and other requirements of this section assures compliance with the VOC emission limits and other requirements of § 129.52 (relating to surface coating processes) for the miscellaneous metal parts and products surface coating processes as specified in Table I Category No. 10 (relating to miscellaneous metal parts & products) of § 129.52.

Proposed subsection (a)(4) specifies that if an owner or operator elects to comply with § 129.52e (relating to control of VOC emissions from automobile and light-duty truck assembly surface coating operations and heavier vehicle coating operations) under § 129.52e(a)(2) or (3), then § 129.52e instead of this section applies to the separate coating line at the facility, or to the

coating of a body or body part for a new heavier vehicle at the facility, or both, for which the election is made. This effectuates the recommendations in the EPA's *Control Techniques Guidelines for Automobile and Light-Duty Truck Assembly Coatings*, EPA-453/R-08-006, Office of Air Quality Planning and Standards, EPA, September 2008, that a state consider giving an owner or operator of a separate coating line at an automobile and light-duty truck assembly coating facility the option of complying with the state's regulation adopted under the 2008 Automobile and Light-Duty Truck Assembly Coatings CTG instead of the 2008 Miscellaneous Metal and Plastic Parts Coatings CTG; and that a state give an owner or operator of a facility that coats bodies or body parts for new heavier vehicles the option to comply with the state's regulation adopted under the 2008 Miscellaneous Metal and Plastic Parts Coatings CTG or the 2008 Automobile and Light-Duty Truck Assembly Coatings CTG. See 2008 Automobile and Light-Duty Truck Assembly Coatings CTG, p. 4 and 2008 Miscellaneous Metal and Plastic Parts Coatings CTG, p. 4.

Proposed subsection (a)(5) specifies that the proposed rulemaking would not apply to an affected owner or operator in the use or application of coatings under certain operating circumstances.

Under proposed subsection (b), the proposed rulemaking establishes 72 definitions to support this section.

Under proposed subsection (c), the proposed rulemaking establishes that the requirements of this section would supersede the requirements of a RACT permit issued under §§ 129.91—129.95 (relating to stationary sources of NO_x and VOCs) to the owner or operator of a source subject to subsection (a) prior to January 1, 2016, except to the extent the RACT permit contains more stringent requirements.

Under proposed subsection (d), the proposed rulemaking establishes emission limitations beginning January 1, 2016, for a person subject to subsection (a)(1). Three options for meeting the emission limitations are proposed: in subsection (d)(1), use of compliant materials that meet the VOC content limit for the applicable coating category specified in the applicable table of VOC content limits in Tables I—V; in subsection (d)(2), a combination of one or more VOC-containing coatings, as applied, that meet the emission rate limits for the applicable coating category specified in the applicable table of emission rate limits in Tables VI—IX, and one or more VOC emissions capture systems and one or more add-on air pollution control devices that meet the requirements of subsection (e)(2); or in subsection (d)(3), use of a VOC emissions capture system and add-on air pollution control device that is acceptable under § 129.51(a) (relating to general) and meets the requirements of subsection (e)(2). Under the third option, the overall control efficiency of a control system, as determined by the test methods and procedures specified in Chapter 139 (relating to sampling and testing), may be no less than 90%.

Under proposed subsection (d)(4), the proposed rulemaking establishes that if more than one VOC content limit or VOC emission rate limit applies to a specific coating, then the least restrictive VOC content limit or VOC emission rate limit applies.

Under proposed subsection (d)(5), the proposed rulemaking establishes that for a miscellaneous metal part or miscellaneous plastic part coating that does not meet the coating categories listed in

Table I, II, VI or VII, the VOC content limit or VOC emission rate limit shall be determined by classifying the coating as a general one component coating or general multi-component coating. The corresponding general one component coating or general multi-component coating limit applies.

Under proposed subsection (d)(6), the proposed rulemaking establishes that for a pleasure craft coating that does not meet the coating categories listed in Table IV or IX, the VOC content limit or VOC emission rate limit shall be determined by classifying the coating as an “all other pleasure craft surface coatings for metal or plastic.” The “all other pleasure craft surface coatings for metal or plastic” limit applies.

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

Under proposed subsection (f), recordkeeping and reporting requirements are established.

Under proposed subsection (g), the proposed rulemaking establishes that a person subject to subsection (a)(1) may not cause or permit the emission into the outdoor atmosphere of VOCs from a miscellaneous metal part coating unit or miscellaneous plastic part coating unit, or both, unless the coatings are applied using one or more specified coating application methods.

Under proposed subsection (h), exempt coatings and exempt coating unit operations are established.

Under proposed subsection (i), work practice requirements for coating-related activities are established.

Under proposed subsection (j), work practice requirements for cleaning materials are established.

Under proposed subsection (k), requirements for measurements and calculations are established.

Proposed § 129.52d contains nine tables. Tables I and II propose surface coating VOC content limits for the overarching surface coating categories of “metal parts and products” and “plastic parts and products,” respectively. Tables III—V propose surface coating VOC content limits for the miscellaneous metal and plastic parts surface coating categories of automotive/transportation and business machine plastic parts, pleasure craft, and motor vehicle materials. These tables (Tables I—V) would be used to meet the first option for complying with emission limitations, in proposed subsection (d)(1), namely the use of compliant materials. Tables VI—IX propose surface coating VOC *emission rate* limits for the same surface coating categories as Tables I—V, though there is not a table of VOC *emission rate* limits specific to motor vehicle materials coatings. Tables VI—IX would be used to meet the second or third option for complying with emission limitations in proposed subsection (d)(2) or (3). The second option, described above, is use of a combination of complying coating materials, a VOC emissions capture system and an add-on air pollution control device. The third option, described above, is use of a VOC emissions capture system and an add-on air pollution control device.

Three VOC content limits in Table IV differ from the CTG and reflect the input the EPA received from the pleasure craft coatings industry regarding technological infeasibility following the EPA's publication of the final CTG. These VOC content limits are for Antifoulant Sealer/Tiecoat (not in CTG), Extreme High-gloss Topcoat (more stringent in CTG) and Other Substrate Antifoulant Coating (more stringent in CTG). The Board expects that these revised VOC content limits for the pleasure craft surface coatings would have a *de minimis* impact on the amount of VOC emission reductions achieved from the implementation of the proposed rulemaking.

The proposed rulemaking would make minor clarifying changes to §§ 129.51, 129.52, 129.67 and 129.75 to support the addition of § 129.52d.

F. *Benefits, Costs and Compliance*

Benefits

The Statewide 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 threat, causing respiratory illnesses and decreased lung function, leading to a lower quality of life. 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. High levels of ground-level ozone affect animals including pets, livestock, and wildlife, in ways similar to humans.

In addition to causing adverse human and animal health effects, the EPA has concluded that high levels 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.

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. The Commonwealth's 62,000 farm families are the stewards of more than 7.7 million acres of

farmland, with \$6.8 billion in cash receipts annually from production agriculture. 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 \$68 billion to the Commonwealth's economy. (Source: Department of Agriculture.)

The 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: Department of Conservation and Natural Resources.) Further, the Commonwealth 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, the Commonwealth also leads in the export of hardwood lumber, exporting nearly \$800 million annually in lumber, logs, furniture products and paper products to more than 70 countries around the world. Recent United States 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 this Commonwealth. Through 2006, the total annual direct economic impact generated by the Commonwealth'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. (Source: Strauss, Lord, Powell; PSU, June 2007, cited in Pennsylvania Hardwoods Development Council Biennial Report, 2009-2010.)

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 reduction of ground-level ozone air pollution concentrations directly benefits the human and animal populations of the Commonwealth with improved ambient air quality and healthier environments. The agriculture and timber industries and related businesses benefit directly from reduced economic losses that result from damage to crops and timber. Likewise, the natural areas and infrastructure within this Commonwealth and downwind benefit directly from reduced environmental damage and economic losses.

This proposed rulemaking is designed to adopt the standards and recommendations in the EPA's 2008 Miscellaneous Metal and Plastic Parts Coatings CTG to meet the requirements of sections 172(c)(1), 182(b)(2) and 184(b)(1)(B) of the CAA. The proposed rulemaking would apply the standards and recommendations in the CTG across this Commonwealth, as required under section 184(b)(1)(B) of the CAA.

The Statewide implementation of the VOC emission control measures in the proposed rulemaking could generate reductions of as much as 1,586 tons of VOC emissions per 12-month rolling period from the 139 potentially affected facilities identified by the Department in its databases, depending on the level of compliance already demonstrated by the owners and operators of these potentially affected facilities. These projected estimated reductions in VOC

emissions and the subsequent reduced formation of ozone 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. Commonwealth residents would also potentially benefit from improved groundwater quality through reduced quantities of VOCs and HAPs from low VOC-content and low HAP-content miscellaneous metal parts and miscellaneous plastic parts coatings and cleaning materials. Although the proposed rulemaking is designed primarily to address ozone air quality, the reformulation of high-VOC content coating materials to low-VOC content coating materials or substitution of low-VOC content coating 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 content and high-HAP content solvents would benefit groundwater quality through reduced loading on water treatment plants and in reduced quantities of high-VOC content and high-HAP content solvents leaching into the ground and streams and rivers.

The Statewide implementation of the proposed rulemaking control measures would assist the Commonwealth in reducing VOC emissions locally and the resultant local formation of ground-level ozone in this Commonwealth from surface coating processes subject to the proposed rulemaking. The Statewide implementation of the proposed rulemaking control measures would also assist the Commonwealth in reducing the transport of VOC emissions and ground-level ozone to downwind states. Statewide implementation would also facilitate implementation and enforcement of the proposed rulemaking in this Commonwealth. The measures in the proposed rulemaking are reasonably necessary to attain and maintain the health- and welfare-based 8-hour ground-level 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 Department reviewed its air quality databases and identified 160 manufacturing facilities in this Commonwealth whose owners and operators may be subject to the proposed rulemaking. According to the Department databases, the actual VOC emissions from these 160 facilities assumed to be subject to the proposed rulemaking totaled 4,552 tons in 2012. Of the 160 facilities reporting VOC emissions in 2012, the owners and operators of 139 of these facilities reported VOC emissions totaling 2.7 tons or more; their combined reported emissions totaled 4,531 tons in 2012. Accordingly, the owners and operators of these 139 facilities would be assumed to emit 2.7 tons or more of actual VOC emissions per 12-month rolling period threshold, including related cleaning activities and before consideration of controls, and would be required to implement VOC emission reduction measures, work practice standards and recordkeeping requirements. The records would be submitted to the Department in an acceptable

format upon receipt of a written request from the Department. The owners and operators of the remaining 21 manufacturing facilities reported VOC emissions below 2.7 tons; their combined reported emissions totaled 21 tons in 2012. The owners and operators of these 21 facilities would be subject only to the recordkeeping requirements and, if requested by the Department, reporting requirements of the proposed rulemaking.

The Board anticipates that implementation of the proposed rulemaking provisions would have minimal financial impact on the owners and operators of affected facilities. The Board expects that the owners and operators of facilities subject to the applicability threshold of 15 pounds per day or the equivalent 2.7 tons per 12-month rolling period, including related cleaning activities and before consideration of controls, will use the reformulation of high-VOC content coating materials to low-VOC content coating materials option because it is more cost effective than installation and operation of VOC emission capture systems and add-on air pollution control devices. The owner and operator of a subject facility that already complies with the requirements of the 2004 NESHAPs or other applicable Best Available Technology permitting requirements through the use of VOC emission capture systems and add-on air pollution control devices may already comply with the requirements of this proposed rulemaking and, if so, might have no additional annual costs.

The EPA based its cost effectiveness information in the CTG on the analysis it performed for the 2004 NESHAPs. The EPA assumed that the owners and operators of facilities subject to the CTG applicability threshold of 2.7 tons per 12-month rolling period would use the reformulation of high-VOC content coating materials to low-VOC content coating materials control option because reformulation of coatings is more cost effective than the installation and operation of VOC emission capture systems and add-on air pollution control devices. The EPA used the 2004 NESHAP costs for reformulation of high-HAP content coating materials to low-HAP content coating materials because these costs are thought to be similar to the costs of reformulating high-VOC content coating materials to low-VOC content coating materials. The EPA estimated the cost averaged across all sizes of facilities subject to the 2004 NESHAPs to be \$10,500 per facility, based on the reformulation of high-HAP content coating materials to low-HAP content coating materials and use of low-HAP content coating materials. The EPA applied the NESHAP-derived cost of \$10,500 per facility to the number of facilities it identified Nationwide as subject to the CTG to calculate a cost effectiveness for implementation of the VOC emission control measures. The EPA estimated a cost effectiveness of \$1,758 per ton of VOC emissions reduced.

The EPA stated in the CTG for these categories that it estimates that implementing the recommended control measures would reduce the emissions of VOC from those facilities at or above the threshold of 15 pounds per day by 35%. See 2008 Miscellaneous Metal and Plastic Parts Coatings CTG, page 32. Therefore, the Board estimates that implementation of the recommended control measures could generate reductions of as much as 1,586 tons (4,531 tons x 35%) of VOC emissions per 12-month rolling period from the 139 facilities identified by the Department in its databases as emitting at or above the 2.7 tons per 12-month rolling period threshold, including related cleaning activities and before consideration of controls, and therefore required to implement the proposed VOC emission reduction control measures. Using the EPA's cost effectiveness of \$1,758/ton of VOC emissions reduced, the Board estimates that the total

maximum annual costs to the affected regulated industry in this Commonwealth could be up to \$2.8 million (\$1,758/ton VOC emissions reduced x 1,586 tons). The approximate annual cost per facility could be as high as \$20,000 (\$2.8 million/139 facilities). This estimated cost of \$20,000 per facility is higher than the EPA's estimate of \$10,500 per facility. This difference in cost may be due in part to the Commonwealth-specific emission data used in the calculation.

The Board also calculated the cost effectiveness for the owners and operators of the 139 potentially affected facilities in this Commonwealth using the EPA's cost of \$10,500 per facility. The estimated total maximum anticipated annual costs to the affected regulated industry could be up to \$1.46 million (\$10,500 x 139 facilities). Therefore, the cost effectiveness for the reductions of 1,586 tons of VOC emissions would be approximately \$920 per ton of VOC emissions reduced (\$1.46 million/1,586 tons) on an annual basis, which is lower than the EPA estimate of \$1,758 per ton of VOC emissions reduced on an annual basis. Again, this may be due in part to the Commonwealth-specific emission data used in the calculation. The Board therefore estimates that the range of cost effectiveness to the regulated industry for implementing the proposed rulemaking is \$920 per ton VOC emissions reduced to \$1,758 per ton reduced. The range of cost per regulated facility for implementing the proposed VOC emission control measures is estimated to be \$10,500 to \$20,000 per year per facility. The Board expects that the costs to the regulated industry in this Commonwealth will be at the lower end of these ranges because low-VOC content coating materials are likely to be readily available at a cost that is not significantly greater than the high-VOC content coating materials they replace as a result of the development of NESHAP-compliant low-HAP content coating materials, since lower HAP content usually means lower VOC content. Therefore, the research and development of low-VOC content coating materials should already be complete and these expenses would not be a factor in the cost of complying with the proposed rulemaking VOC emission control measures.

The compliance cost per facility may be even lower given that the proposed rulemaking provides as one compliance option the use of individual compliant coating materials in proposed § 129.52d(d)(1). Coatings that are compliant with the HAP content limits of the 2004 NESHAPs and with the proposed rulemaking VOC content limits are readily available to the owners and operators of all sizes of subject facilities. The proposed rulemaking would provide flexibility in compliance through the second option of using a combination of VOC content limit compliant coating materials and specified high-transfer-efficient application methods with a VOC emissions capture system and add-on air pollution control device in subsection (d)(2). The third compliance option, the use of a VOC emissions capture system and add-on air pollution control device with an overall control efficiency of at least 90%, instead of the use of complying coating materials and specified high-transfer-efficient application methods, is provided in subsection (d)(3). However, because of the wide availability and lower cost (compared to installation and operation of a VOC emission capture system and add-on air pollution control device) of compliant VOC content coating materials and high-transfer-efficient coating application methods, compliant coating materials and specified high-transfer-efficient coating application methods are generally expected to be used by affected owners and operators to reduce VOC emissions from miscellaneous metal parts surface coating processes and miscellaneous plastic parts surface coating processes.

The implementation of the work practices for the use and application of cleaning materials is expected to result in a net cost savings. The recommended work practices for cleaning activities should reduce the amounts of cleaning materials used by reducing the amounts that are lost to evaporation, spillage and waste.

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, as specified under § 127.463(c) (relating to operating permit revisions to incorporate applicable standards). If 3 years or more remain in the permit term, the requirements would be incorporated as applicable requirements in the permit within 18 months of the promulgation of the final-form rulemaking, as required under § 127.463(b).

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 their in-house staff.

Paperwork requirements

The recordkeeping and reporting requirements for owners and operators of affected facilities at, above or below the threshold for control measures should be minimal because the records required by the proposed rulemaking are in line with what the industry currently tracks for inventory purposes or is required in current permits. The owner or operator of a facility subject to the proposed rulemaking is required to maintain records sufficient to demonstrate compliance with the applicable requirements. Records maintained for compliance demonstrations may include purchase, use, production and other records. The records would be maintained on site for 2 years, unless a longer period is required by an order, plan approval or operating permit issued under Chapter 127 (relating to construction, modification, reactivation and operation of sources).

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.

Statewide implementation of the VOC emission control measures in the proposed rulemaking could generate reductions of as much as 1,586 tons of VOC emissions per 12-month rolling period from the 139 facilities identified by the Department in its databases, depending on the level of compliance already demonstrated by the owners and operators of these facilities. These projected estimated reductions in VOC emissions and the subsequent reduced formation of ozone 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 and citizens and the environment of this Commonwealth experience the benefits of improved ground-level ozone air quality. Commonwealth residents would also potentially benefit from improved groundwater quality through reduced quantities of VOCs and HAPs from low-VOC content and low-HAP content miscellaneous metal parts and miscellaneous plastic parts coatings and cleaning materials. Although the proposed rulemaking is designed primarily to address ozone air quality, the reformulation of high-VOC content coating materials to low-VOC content coating materials or substitution of low-VOC content coating 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 content and high-HAP content solvents would benefit groundwater quality through reduced loading on water treatment plants and in reduced quantities of high-VOC content and high-HAP content solvents leaching into the ground, streams and rivers.

The proposed rulemaking provides as one compliance option the use of individual compliant coating materials in proposed § 129.52d(d)(1). Coatings that are compliant with the HAP content limits and emission rate limits of the 2004 NESHAPs and with the proposed rulemaking VOC content limits and emission rate limits are readily available to the owners and operators of all sizes of subject facilities. The proposed rulemaking would provide flexibility in compliance through the second option of using a combination of VOC content limit compliant coating materials and specified high-transfer-efficient application methods with a VOC emissions capture system and add-on air pollution control device in subsection (d)(2). A third compliance option, the use of a VOC emissions capture system and add-on air pollution control device with an overall control efficiency of at least 90%, instead of the use of complying coating materials and specified high-transfer-efficient application methods, is provided in subsection (d)(3). However, because of the wide availability and lower cost (compared to installation and operation of VOC emissions capture systems and add-on air pollution control devices) of compliant VOC content coating materials and high-transfer-efficient coating application methods, compliant coating materials and specified high-transfer-efficient coating application methods are generally expected to be used by affected owners and operators to reduce VOC emissions from surface coating processes subject to this proposed rulemaking.

The implementation of the work practices for the use and application of cleaning materials is expected to result in a net cost savings. The recommended work practices for cleaning activities should reduce the amounts of cleaning materials used by reducing the amounts that are lost to evaporation, spillage and waste.

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 _____, 2014, the Department submitted a copy of this proposed rulemaking and a copy of a Regulatory Analysis Form to the Independent Regulatory Review Commission (IRRC) and to the Chairpersons of the House and Senate Environmental Resources and Energy Committees. 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 must 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 Board. Comments, suggestions or objections must be received by the Board by **DATE**. 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 **DATE**. 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. 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.

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

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.

Written comments should be mailed to the Environmental Quality Board, P.O. Box 8477, Harrisburg, PA 17105-8477. Express mail should be sent to the 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 ____ p.m. on the following dates:

_____ (blank) _____

_____ (blank) _____

_____ (blank) _____

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.

DANA K. AUNKST,
Acting Chairperson