

# 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: 7-491

**IRRC Number:**

3109

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

**(4) Short Title:** Control of VOC Emissions from Miscellaneous Metal Parts Surface Coating Processes, Miscellaneous Plastic Parts Surface Coating Processes and Pleasure Craft Surface Coatings

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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 final rulemaking amends 25 Pa. Code Chapter 129 (relating to standards for sources) by adding § 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, miscellaneous plastic parts surface coating processes and pleasure craft surface coatings. These processes include surface coating of miscellaneous metal parts or products, miscellaneous plastic parts or products, automotive and transportation plastic parts, business machine plastic parts, pleasure craft (recreational boats), 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 final rulemaking adds terms and definitions to § 129.52d to support the interpretation of the measures and amends §§ 129.51, 129.52, 129.67 and 129.75 to support the addition of § 129.52d.

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 (NO<sub>x</sub>) 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. Consistent with Section 4.2(a) of the Pennsylvania Air Pollution Control Act (act), 35 P.S. § 4004.2(a), the ground-level ozone air pollution reduction measures in this final rulemaking are reasonably required to achieve and maintain the health-based 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 final 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) upon publication in the *Pennsylvania Bulletin* as final-form regulation.

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

The final rulemaking is authorized under section 5(a)(1) of the act (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. Section 5(a)(8) of the act (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.**

*Federal mandates*

Yes. State regulations to control VOC emissions from the miscellaneous metal parts surface coating processes, miscellaneous plastic parts surface coating processes and pleasure craft surface coatings covered in this final rulemaking, as well as the VOC emissions from related cleaning activities, are required under Federal law. 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 final rulemaking establishes VOC emission limitations and other requirements consistent with the recommendations of the EPA 2008 Control Techniques Guidelines for Miscellaneous Metal and Plastic Parts Coatings (2008 MMPP 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). State regulations implementing the recommendations of the 2008 MMPP CTG were due to the EPA by October 7, 2009. See 73 FR 58481, 58484.

The Commonwealth's final-form regulation will be approved by the EPA as a revision to the Commonwealth's SIP 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, 53762 (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 "reasonably available control technology" or "RACT," for sources of emissions of NO<sub>x</sub> 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 CTG document issued by the EPA prior to the area's date of attainment of the applicable ozone NAAQS. CTG documents provide states with information about a VOC emission source category and recommendations of what the EPA considers to be RACT for the source 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 source 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.

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 aggregate 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 on the section 183(e) list where the EPA determines that the CTG will be "substantially as effective as regulations" in reducing emissions of VOC in ozone nonattainment areas. Under CAA section 183(e), a National regulation for consumer or commercial products is limited to the measures applicable to manufacturers, processors, distributors, or importers of the solvents, materials, or products supplied to the consumer or industry. CAA section 183(e) does not authorize the EPA to issue National regulations that would directly regulate end-users of these products. By contrast, CTGs are guidance documents that recommend RACT measures that States can adopt and apply to the end-users of products. This dichotomy (i.e., that the EPA cannot directly regulate end-users under CAA section 183(e), but can address end-users through a CTG) created by Congress is relevant to the EPA's evaluation of the relative merits of promulgating a National regulation for a source category versus issuing a CTG. See 73 FR 58483.

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; *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 MMPP CTG document is available on the EPA website at: [www.epa.gov/airquality/ozonepollution/SIPToolkit/ctgs.html](http://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) ([www.otcair.org](http://www.otcair.org)) established under section 184. 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 this Commonwealth, 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 miscellaneous metal products coatings and plastic parts coatings, including surface coating of automotive and transportation plastic parts, business machine plastic parts, pleasure craft (recreational boats), and bodies or body parts for new heavier vehicles, as well as VOC emissions from related cleaning activities, which are covered by the applicable 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.

The Commonwealth's SIP must also include regulations applicable statewide to control VOC emissions from 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 VOC emissions from related cleaning activities. In the 2008 notice of final determination and availability of final Control Techniques Guidelines, the EPA determined that the recommendations of the 2008 MMPP 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 Department's Bureau of Air Quality reviewed the recommendations regarding VOC emission reduction measures included in the 2008 MMPP CTG for their applicability to the ground-level ozone reduction measures necessary for this Commonwealth. The Bureau of Air Quality has determined that VOC emission reduction measures consistent with the recommendations provided in the 2008 MMPP CTG are appropriate to be implemented in this Commonwealth as RACT for these source categories. The Bureau of Air Quality determined that three VOC content limits applicable to the pleasure craft coatings industry should be revised from the CTG to represent RACT for that industry, based on a 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. The ground-level ozone reduction measures included in this final rulemaking will achieve VOC emission reductions locally and will also reduce the transport of VOC emissions and ground-level ozone to downwind states. Adoption of VOC emission requirements for these sources is part of the Commonwealth's strategy, in concert with other OTR jurisdictions, to further reduce the transport of VOC ozone precursors and ground-level ozone throughout the OTR to attain and maintain the 8-hour ozone NAAQS.

*Deadline for action and possible consequences for missing the deadline*

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) of the CAA must submit SIP revisions in response to the CTG. The EPA issued the Miscellaneous Metal and Plastic Parts Coatings 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 Miscellaneous Metal and Plastic Parts Coatings 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 (in other words, makes a "failure to submit" finding), sanctions will be imposed. Sanctions cannot be imposed until 18 months after the Administrator makes the "failure to submit finding," and sanctions cannot be imposed if a deficiency has been corrected within the 18-month period after the finding. 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 of the CAA and its implementing regulations, the Administrator first imposes 2:1 emission offset sanctions for new or modified major stationary sources in the nonattainment area, and then, if the deficiency has not been corrected within 6 months, also applies Federal 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 miscellaneous metal products coatings, plastic parts coatings and pleasure craft coatings.

**(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.**

*Purpose*

The purpose of this final rulemaking is to implement control measures to reduce VOC emissions Statewide from miscellaneous metal parts surface coating processes and miscellaneous plastic parts surface coating processes, including surface coating of automotive and transportation plastic parts, business machine plastic parts, pleasure craft (recreational boats), and bodies or body parts for new heavier vehicles, as well as VOC emissions from related cleaning activities. The final rulemaking also implements VOC emission control measures for 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 VOC emissions from related cleaning activities. VOCs are precursors for ground-level ozone formation. Ground-level ozone, a public health and welfare hazard, is not emitted directly by miscellaneous metal parts surface coatings, miscellaneous plastic parts surface coatings or pleasure craft surface coatings, but forms from a photochemical reaction between VOCs and NO<sub>x</sub> in the presence of sunlight.

*Summary of impact of ozone, a criteria air pollutant*

The EPA regulates ground-level ozone as a criteria air pollutant because of its widespread adverse public health and welfare effects, including adverse 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.

The final-form VOC emission control measures, which are consistent with the recommendations in the EPA's 2008 MMPP CTG, will reduce VOC emissions from miscellaneous metal parts surface coating processes, miscellaneous plastic parts surface coating processes, and pleasure craft surface coatings that do not already comply with the control measures, in ozone nonattainment and maintenance areas in this Commonwealth. Implementation of the final-form VOC control measures will benefit the public health and welfare of the approximately 12.7 million residents and the numerous animals, crops, vegetation and natural areas of this Commonwealth by reducing emissions of VOCs and, therefore, the subsequent formation of ground-level ozone air pollution. Promulgation of the final-form regulation will allow the Commonwealth to make progress in achieving or maintaining, or both, the 1997, 2008, and 2015 8-hour ozone NAAQS statewide. 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 VOC emission control measures in this final rulemaking are reasonably necessary to attain and maintain the health-based 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.

*Ozone NAAQS; Implementation of permanent and enforceable control measures for attainment and maintenance*

The EPA promulgated the ground-level ozone NAAQS in July 1997 at 0.08 part per million (ppm) averaged over 8 hours. See 62 FR 38855 (July 18, 1997). Because ozone ambient air monitoring data is measured out to three decimal places, the standard effectively became 0.084 ppm because of rounding; areas with

ozone levels as high as 0.084 ppm (84 parts per billion (ppb)) were considered as meeting the 0.08 ppm standard. In 2004, the EPA designated 37 counties in this Commonwealth as 8-hour ozone nonattainment areas for the 1997 8-hour ozone NAAQS. See 69 FR 23858, 23931 (April 30, 2004). Based on the ambient air monitoring data for the 2015 ozone season, all monitored areas of the Commonwealth are attaining the 1997 8-hour ozone NAAQS. Maintenance plans have been submitted to the EPA and approved for the 1997 ozone NAAQS. Section 175A(a) of the CAA (42 U.S.C.A. § 7505a(a)) prescribes that the maintenance plans include permanent and enforceable control measures that will provide for the maintenance of the 1997 ozone NAAQS for at least 10 years following the EPA's redesignation of the areas to attainment of the 1997 ozone NAAQS. Section 175A(b) of the CAA (42 U.S.C.A. § 7505a(b)) prescribes that 8 years after the EPA redesignates an area to attainment of the applicable ozone NAAQS, additional maintenance plans approved by the EPA must also provide for the maintenance of the ozone NAAQS for another 10 years following the expiration of the initial 10-year period.

In March 2008, the EPA lowered the ozone NAAQS to 0.075 ppm (75 ppb) 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, Beaver, Berks, Bucks, Butler, Carbon, Chester, Delaware, Fayette, Lancaster, Lehigh, Montgomery, Northampton, Philadelphia, Washington, and Westmoreland Counties. The Department's analysis of 2014 ambient air ozone season monitoring data showed that all ozone samplers in this Commonwealth, except the Harrison sampler in Allegheny County, were monitoring attainment of the 2008 ozone NAAQS. The certified 2015 ozone season monitoring data indicates that all areas of this Commonwealth, including the Harrison sampler, are monitoring attainment of the 2008 ozone NAAQS. As with the 1997 ozone NAAQS, the Department must ensure that the 2008 ozone NAAQS are attained and maintained by implementing permanent and enforceable control measures. At the Department's request, the EPA granted 1-year attainment date extensions for the 2008 ozone NAAQS in the Philadelphia and Pittsburgh-Beaver Valley Areas due to air monitor violations in New Jersey and Maryland.

On October 1, 2015, the EPA again lowered the ozone NAAQS, this time to 0.070 ppm (70 ppb) averaged over 8 hours. See 80 FR 65292 (October 26, 2015). Based on ambient air monitoring data for the 2013-2015 ozone seasons, eight monitors in Pennsylvania have design values that violate the 2015 ozone NAAQS. The samplers are located in Allegheny, Armstrong, Bucks, Delaware, Indiana, Lebanon, Montgomery, and Philadelphia Counties. The Commonwealth must submit designation recommendations for the 2015 ozone NAAQS to the EPA by October 2016. The EPA's final designations for attainment and nonattainment areas for the 2015 ozone NAAQS are expected to take effect in December 2017.

#### *Monetized public health benefits of attaining the 2008 and 2015 ozone NAAQS*

The EPA estimated that the monetized health benefits of attaining the 2008 8-hour ozone NAAQS of 0.075 ppm range from \$8.3 billion to \$18 billion on a National basis by 2020.<sup>1</sup> Prorating that benefit to the Commonwealth, based on population, results in a public health benefit of \$337 million to \$732 million. The EPA estimated that the monetized health benefits of attaining the 2015 8-hour ozone NAAQS of 0.070 ppm range from \$1.5 billion to \$4.5 billion on a National basis by 2025.<sup>2</sup> Prorating that benefit to the Commonwealth, based on population, results in a public health benefit of \$63 million to \$189 million. The

<sup>1</sup> *Regulatory Impact Analysis, Final National Ambient Air Quality Standard for Ozone*, July 2011, [http://www.eenews.net/assets/2011/10/04/document\\_gw\\_02.pdf](http://www.eenews.net/assets/2011/10/04/document_gw_02.pdf).

<sup>2</sup> *Regulatory Impact Analysis of the Final Revisions to the National Ambient Air Quality Standards for Ground-Level Ozone*, September 2015, <https://www3.epa.gov/ttn/naaqs/standards/ozone/data/20151001ria.pdf>.

Department is not stating that these estimated monetized health benefits would all be the result of implementing the final rulemaking RACT measures, but the EPA estimates are indicative of the benefits to Commonwealth residents of attaining the 2008 and 2015 8-hour ozone NAAQS.

*Adverse health and welfare effects to humans, animals and the environment*

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.

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; reducing the size and quality of seeds; reducing growth and survivability of tree seedlings; and increasing 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.

*Adverse effects on the Commonwealth's economy*

Ground-level ozone also adversely impacts Pennsylvania's farm crops, forests, parks, and timber. 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 growth and smaller, lower-quality seeds and tubers with less oil or protein. If ozone episodes last a few days, visible injury to some leaf crops, including lettuce, spinach, and tobacco, as well as visible injury to the leaves of ornamental plants, including grass, flowers, and shrubs, can appear. This injury can be seen as small pale yellow or brown blotches, below which the cells have died. Other types of welfare loss may not be quantifiable, such as the reduced aesthetic value of trees growing in heavily visited parks.

Information about the economic benefit of the Pennsylvania agricultural industry to the Commonwealth is provided by the Pennsylvania Department of Agriculture. Pennsylvania's 59,000 farm families are the stewards of more than 7.7 million acres of farmland. With \$7.5 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 \$75 billion to Pennsylvania's economy. (Source: Pennsylvania Department of Agriculture, 2016, About PDA.) These families, farms, and related businesses benefit directly from the reduction of ground-level ozone air pollution concentrations to attain and maintain the ozone NAAQS.

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. Hundreds of concessions throughout the park system help complete the park experience for both state and out-of-state visitors. Pennsylvania's 2.1 million-acre state forest system, found in 48 of Pennsylvania's 67 counties, comprises 12% of the forested area in the Commonwealth. The state forest represents one of the largest expanses of public forestland in the eastern United States, making it a truly priceless public asset. The state forest provides an abundance of high quality forest products, which help to support a forest products industry with sales in excess of \$16 billion annually, a total economic impact of \$27 billion annually, and that employs in excess of 80,000 people.<sup>3</sup>

Information about Pennsylvania's hardwoods industry is provided by the Pennsylvania Department of Agriculture in its 2009-2010 biennial Hardwoods Development Council report, cited below. The following information and references are found in that report. 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.)<sup>4</sup>

**(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 no Federal statutory or regulatory RACT limits for VOC emissions from miscellaneous metal parts surface coating processes, miscellaneous plastic parts surface coating processes, or pleasure craft surface coatings. In 2004, however, the EPA promulgated the National Emission Standards for Hazardous Air Pollutants for Surface Coating of Miscellaneous Metal Parts and Products, 40 CFR Part 63, Subpart MMMM (relating to National emission standards for hazardous air pollutants for surface coating of miscellaneous metal parts and products), set forth at 40 CFR 63.3880—63.3981. See 69 FR 130 (January 2, 2004). Also, in 2004, the EPA promulgated the National Emission Standards for Hazardous Air Pollutants for Surface Coating of Plastic Parts and Products, 40 CFR Part 63, Subpart PPPP (relating to National emission standards for hazardous air pollutants for surface coating of plastic parts and products), set forth at 40 CFR 63.4480—63.4581. See 69 FR 20968 (April 19, 2004). These two NESHAPs are collectively referred to as the 2004 NESHAPs throughout this document. 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.

<sup>3</sup> Pennsylvania Department of Conservation and Natural Resources, Bureau of Forestry, State Forest Resource Management Plan, 2007 Update. [http://www.apps.dcnr.state.pa.us/forestry/sfrmp/sfrmp\\_update\\_2007.pdf](http://www.apps.dcnr.state.pa.us/forestry/sfrmp/sfrmp_update_2007.pdf)

<sup>4</sup> Source: Pennsylvania Hardwoods Development Council Biennial Report, 2009-2010; and Pennsylvania Hardwoods Development Council Photo, *Pennsylvania Hardwood Leading the Nation*. Copies of these documents are available from the Bureau of Air Quality upon request.



When developing the VOC emission reduction RACT measures included in its 2008 MMPP CTG, 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 HAP emissions, 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 also 61 FR 27133 (May 30, 1996). Most of the Federal recommendations for control of VOC emissions included in the 2008 MMPP 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 set forth in the 2004 NESHAPs.

This final rulemaking is designed to adopt VOC emission limitations and requirements consistent with the standards and recommendations in the 2008 MMPP CTG to meet the requirements of sections 172(c)(1), 182(b)(2), and 184(b)(1)(B) of the CAA. The final rulemaking applies these VOC emission limitations and requirements across this Commonwealth, as required under section 184(b)(1)(B) of the CAA. The VOC content and emission rate limitations and other requirements of the final rulemaking are not more stringent than the recommendations included in the EPA 2008 MMPP CTG upon which the final rulemaking is based. The ground-level ozone air pollution reduction measures in this final rulemaking are reasonably necessary to attain and maintain the health-based and welfare-based ozone NAAQS in this Commonwealth and to satisfy related CAA requirements.

**(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 final rulemaking is similar to the regulations already adopted by Connecticut, New Hampshire, and Maryland for these source categories. These states are members of the OTR, along with the Commonwealth. The final rulemaking will have no effect on Pennsylvania's ability to compete with other states that have miscellaneous metal parts surface coating operations and miscellaneous plastic parts surface coating operations, including operations that surface coat automotive and transportation plastic parts, business machine plastic parts, pleasure craft (recreational boats), or bodies or body parts for new heavier vehicles, or separate coating lines at automobile and light-duty truck assembly coating facilities 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.

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

Yes, other Department regulations are affected by this final rulemaking.

Title 25 *Pa. Code*, Chapter 129, is amended as follows:

Section 129.51(a) (relating to general) is amended to establish that compliance with § 129.52d may be achieved by alternative methods.

Section 129.51(a)(3) is amended to establish that compliance by a method other than the use of a low-VOC content coating, adhesive, sealant, adhesive primer, sealant primer, surface preparation solvent or cleanup

solvent or ink which meets the applicable emission limitation in § 129.52d shall be determined on the basis of equal volumes of solids.

Section 129.51(a)(6) is amended to establish that the alternative compliance method is incorporated into a plan approval or operating permit, or both, reviewed by the EPA, including the use of an air cleaning device to comply with § 129.52d.

Section 129.52(g) (relating to surface coating processes) is amended to establish that the records required for surface coating processes regulated under § 129.52, including surface coating of miscellaneous metal parts and products, shall 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) and that the records shall be submitted to the Department in an acceptable format on a schedule reasonably prescribed by the Department.

Section 129.52 is further amended to add subsection (k). Subsection (k) was not in the proposed rulemaking. This subsection is added in response to comments received during the public comment period. This amendment to the final rulemaking establishes that the provision of § 129.52d(a)(5)(i) applies to surface coating processes regulated under Table I, Category 10, miscellaneous metal parts and products. Aerosol coatings shall meet the requirements of 40 CFR Part 59 Subpart E (relating to National volatile organic compound emission standards for aerosol coatings). Subsection (k) is added to provide clarity on the applicability of the requirements of § 129.52, Table I, Category 10, Miscellaneous Metal Parts and Products, to the use of aerosol coatings, including hand-held aerosol cans.

Section 129.67(a) (relating to graphic arts systems) is amended to establish that it applies to the owner or operator of a facility whose rotogravure and flexographic printing presses by themselves or in combination with a surface coating operation subject to § 129.52d have the potential to emit or have emitted VOCs into the outdoor atmosphere in quantities greater than 1,000 pounds (460 kilograms) per day or 100 tons (90,900 kilograms) per year during any calendar year since January 1, 1987.

Section 129.75(b)(1) (relating to mobile equipment repair and refinishing) is amended to establish that it does not apply to a person who applies surface coating to mobile equipment or components if the process is already covered by § 129.52d.

The requirements of § 129.52d supersede the requirements of a RACT permit issued under §§ 129.91—129.95 (relating to stationary sources of NO<sub>x</sub> and VOCs) to the owner or operator of a source subject to § 129.52d prior to January 1, 2017, except to the extent the RACT permit contains more stringent requirements.

No other regulations promulgated by this agency or other state agencies are 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 Board approved publication of the proposed rulemaking at its meeting of October 21, 2014. The proposed rulemaking was published at 45 Pa.B. 4366 (August 8, 2015). Three public hearings were held on September 8, 9, and 10, 2015, in Norristown, Harrisburg, and Pittsburgh, respectively. The public comment period closed on October 13, 2015, for a 67-day public comment period. Comments were received from one commentator, GE Transportation (GET). In addition, the Independent Regulatory Review Commission (IRRC) provided comments on the proposed rulemaking.

Concerns expressed by GET and IRRC with the proposed compliance date of January 1, 2016, were resolved by revising the final-form regulation to require compliance by January 1, 2017. January 1, 2017, is the mandated deadline for implementation of RACT measures for the 2008 ozone NAAQS under the March 6, 2015, EPA final rule for *Implementation of the 2008 National Ambient Air Quality Standards for Ozone: State Implementation Plan Requirements* (80 FR 12279). The EPA stated that the RACT measures for the 2008 ozone NAAQS must be implemented “as expeditiously as practicable, but no later than January 1 of the 5<sup>th</sup> year after the effective date of a nonattainment designation.” The nonattainment designations across the country were effective for the 2008 ozone NAAQS on July 20, 2012. Consequently, RACT measures for the 2008 8-hour ozone standard must be implemented by January 1, 2017.

Concerns expressed by GET and IRRC regarding the applicability of 25 Pa. Code § 129.52 to the use and application of aerosol coatings and hand-held aerosol cans were resolved by adding § 129.52(k) to provide clarity on the applicability of the requirements of § 129.52, Table I, Category 10, Miscellaneous Metal Parts and Products, to the use of aerosol coatings.

IRRC noted that the owner or operator of a miscellaneous metal part surface coating process or a miscellaneous plastic part surface coating process have the option to be regulated under this rulemaking or under the concurrently proposed rulemaking for the control of VOC emissions from automobile and light-duty truck assembly coating operations and heavier vehicle coating operations (see EQB #7-490 or IRRC #3110). IRRC requested that the Board ensure that the two rulemakings are adopted on the same date. The Board agrees and notes that it intends to consider the two final rulemakings concurrently. All comments received on the proposed rulemaking and related issues have been addressed in the final rulemaking. There are no unresolved issues.

The draft final-form Annex A was discussed with the Air Quality Technical Advisory Committee (AQTAC) on February 11, 2016. The AQTAC voted 17-0-0 (yes: no: abstain) to concur with the Department’s recommendation to forward the final rulemaking to the Board for consideration. The draft final-form Annex A was discussed with the Citizens Advisory Council (CAC) Policy and Regulatory Oversight (PRO) Committee on March 2, 2016. On the recommendation of the PRO Committee of the CAC, on March 15, 2016, the CAC concurred with the Department’s recommendation to forward the final rulemaking to the Board for consideration. The draft final-form Annex A was discussed with the Small Business Compliance Advisory Committee (SBCAC) on April 27, 2016. The SBCAC voted unanimously to concur with the Department’s recommendation to forward the final rulemaking to the Board for consideration, with a recommendation to consider flexibility for small businesses. The AQTAC, SBCAC, and CAC meetings are advertised and open to the public.

On September 14, 2009, the EPA was contacted by the pleasure craft coatings industry to reconsider some of the VOC emission limits recommended in the final 2008 MMPP CTG. The pleasure craft coatings industry asserted that three of the VOC emission limits in the 2008 MMPP 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. Other states, including Connecticut, New Hampshire, and Maryland, have included the pleasure craft coatings industry's suggested changes in their regulations. The regulations of each of these three states, including the revised pleasure craft coating VOC emission limits, have been approved by the EPA as revisions to each state's SIP.

Accordingly, the final rulemaking includes the following differences from the CTG related to the pleasure craft surface coatings categories, in Table IV:

- Added a specialty category for Antifoulant Sealer/Tiecoat with a VOC content limit of 0.42 kg VOC/liter coating and 3.5 lb VOC/gallon coating, less water and exempt compounds, as applied.
- Changed the VOC content limits for the Extreme High-gloss Topcoat category from 0.49 kg VOC/liter coating to 0.60 kg VOC/liter coating and from 4.1 lb VOC/gallon coating to 5.0 lb VOC/gallon coating, less water and exempt compounds, as applied.
- Changed the VOC content limits for the Other Substrate Antifoulant Coating category from 0.33 kg VOC/liter coating to 0.40 kg VOC/liter coating and from 2.8 lb VOC/gallon coating to 3.3 lb VOC/gallon coating, less water and exempt compounds, as applied.

The Department expects that these revised VOC content limits for the pleasure craft surface coatings will have a *de minimis* impact on the amount of VOC emission reductions achieved from the implementation of the final rulemaking.

**(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 final rulemaking applies 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 (recreational boats), or bodies or body parts for new heavier vehicles, that applies subject coatings to the surfaces of the parts and products that are produced. This final rulemaking also applies to the owner and operator of 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. This final rulemaking applies as well to the owner and operator of a facility that applies subject coatings to the surfaces of metal parts or products, or plastic parts or products, on a contractual basis.

The provisions of the final rulemaking apply to the owner and operator of a process that applies subject coatings to the surfaces of a variety of metal and plastic parts and products that are not covered by the recommendations provided in the Control Technique Guidelines that have been issued by the EPA for other categories of consumer or commercial products. The miscellaneous metal products coatings and plastic parts coatings categories identified by the EPA under section 183(e) of the CAA, and covered by the final

rulemaking, consist of the coatings that are applied to the surfaces of a varied range of metal and plastic parts and products. These parts and products are constructed either entirely or partially from metal or plastic, or both. These 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. A heavier vehicle is defined as a self-propelled vehicle designed for transporting persons or property on a street or highway that has a gross vehicle weight rating over 8,500 pounds.<sup>5</sup>

The EPA VOC emission control recommendations provided in the 2008 MMPP CTG, and reflected in the final rulemaking, include VOC content limits and VOC emission rate limitations for metal parts and products surface coatings and plastic parts and products surface coatings, including automotive and transportation plastic parts surface coatings, business machine plastic parts surface coatings, and pleasure craft surface coatings. The EPA recommendations also include VOC content limits for motor vehicle materials surface coatings, which are reflected in the final rulemaking as well. The motor vehicle material surface coating VOC content limits, as well as the other final-form coating VOC content limits and VOC emission rate limitations, are also applicable to the owner and operator of 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.

The owner or operator of a separate coating line at an automobile and light-duty truck assembly coating facility, and the owner or operator of a facility that coats a body or body part for a new heavier vehicle, have the option to elect to be regulated under § 129.52e (relating to control of VOC emissions from automobile and light-duty truck assembly surface coating operations and heavier vehicle coating operations) instead of this final rulemaking. The rulemaking provides this option in order to grant these owners and operators flexibility in complying with their permit conditions or to optimize their operations. 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 (2008 ALDT CTG) instead of the 2008 MMPP 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 MMPP CTG or the 2008 ALDT CTG.<sup>6</sup>

An owner or operator of an affected surface coating process that applies a surface coating regulated in one of these categories and emits 2.7 tons or more of actual VOC emissions per 12-month rolling period threshold, including VOC emissions from related cleaning activities, before consideration of controls, is required to meet the applicable VOC content limit for the coating or the VOC emission rate limit applicable to the coating and is required to implement work practice standards and recordkeeping. An owner and

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<sup>5</sup> See *Control Techniques Guidelines for Miscellaneous Metal and Plastic Parts Coatings*, EPA-453/R-08-003, page 4, footnote.

<sup>6</sup> See *Control Techniques Guidelines for Automobile and Light-Duty Truck Assembly Coatings*, EPA-453/R-08-006, p. 4 and *Control Techniques Guidelines for Miscellaneous Metal and Plastic Parts Coatings*, EPA-453/R-08-003, p. 4.

operator of an affected surface coating process with actual VOC emissions below the 2.7 tons per 12-month rolling period threshold, including VOC emissions from related cleaning activities, before consideration of controls, is subject only to the recordkeeping requirements and, if requested by the Department, reporting requirements of the final rulemaking. The types and numbers of these businesses, and how they may be affected, are described below.

However, coatings that are applied to test panels and coupons as part of research and development, quality control, or performance testing activities at paint research or manufacturing facilities are not included in the miscellaneous metal products and plastic parts coatings categories under section 183(e) and are therefore not addressed by the EPA in this CTG.<sup>7</sup> These coating activities are not regulated by the final rulemaking.

The Department's assessment of how many owners and operators of miscellaneous metal parts and products and plastic parts and products manufacturing facilities may potentially be subject to the final rulemaking resulted from reviewing information provided in the CTG for these categories, as well as the 2004 NESHAPs, the Department's databases, the U.S. Small Business Administration (SBA) Small Business Size Regulations under 13 CFR Chapter 1, Part 121 (relating to small business size regulations), and information obtained from the Pennsylvania Small Business Development Center's (SBDC) Environmental Management Assistance Program (EMAP). The North American Industry Classification System (NAICS) codes provided by the EPA in the final rule issuing the CTG and the final rules promulgating the 2004 NESHAPs were used to identify potentially subject facilities. The NAICS is an industry classification system developed by Canada, Mexico, and the United States that groups establishments into industry groups based on the economic activities, producing and nonproducing, in which the establishment is primarily engaged. NAICS is a two- through six-digit hierarchical classification code system, offering five levels of detail. Each digit in the code is part of a series of progressively narrower categories, and the more digits in the code signify greater classification detail. The first two digits designate the economic sector, the third digit designates the subsector, the fourth digit designates the industry group, the fifth digit designates the NAICS industry, and the sixth digit designates the National industry. A complete and valid NAICS code contains six digits. See <http://www.naics.com/frequently-asked-questions/>, question number 18. More information about the United States portion of the NAICS is available at <http://www.census.gov/eos/www/naics/>.

The EPA provided three-digit NAICS codes in the Federal Register final rule notice issuing the 2008 MMPP CTG. 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, 58482. The Federal Register final rule notices promulgating the 2004 NESHAPs listed corresponding six-digit NAICS codes that provided more focused search criteria. These six-digit NAICS codes identified a variety of manufacturing sectors, as described above. See *National Emission Standards for Hazardous Air Pollutants: Surface Coating of Miscellaneous Metal Parts and Products*, 69 FR 130, and *National Emission Standards for Hazardous Air Pollutants: Surface Coating of Plastic Parts and Products*, 69 FR 20968.

The Department gathered information from the "Environmental Facility Application Compliance Tracking System" (eFACTS) database and the Air Information Management System (AIMS) database about potentially affected facilities. These are Department databases that share data and interface with each other. Facility specific information, including the NAICS identifying code, is inputted into eFACTS; the database

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<sup>7</sup> See *Control Techniques Guidelines for Miscellaneous Metal and Plastic Parts Coatings*, EPA-453/R-08-003, page 5.

contains records of inspections at permitted and some previously inspected facilities for which permits are not required. Site-specific sources and air pollutant emissions, as well as site NAICS codes, are inputted into AIMS to maintain the air pollutant emission inventory. However, eFACTS and AIMS do not provide an exhaustive list of all facilities in this Commonwealth, but only those with which the Department has had contact and a reason to input their data; these are usually the largest emitters of air pollutants.

A search of the eFACTS database and the AIMS database, using the NAICS codes provided in the EPA's final rule notices promulgating the 2004 NESHAPs as the search codes, generated a list of 344 miscellaneous metal parts and miscellaneous plastic parts manufacturing facilities in this Commonwealth reporting VOC emissions or having a permit issued by the Department, or both. The owners and operators of 160, or 46.5%, of these 344 facilities reported VOC emissions for calendar year 2012. The Department assumed that the owners and operators of these 160 facilities all do surface coating of miscellaneous metal parts, miscellaneous plastic parts, or pleasure craft (recreational boats). This is not likely, however, as a search of the AIMS data for a small number of the 160 listed facilities showed that some with VOC emissions over 2.7 tpy may either be covered by an exemption in the final rulemaking or by another surface coating regulation in 25 Pa. Code Chapter 129 and, therefore, are not subject to the final rulemaking; or do not conduct surface coating and have VOC emissions from some other type of process, such as parts washing.

According to the Department databases, the actual VOC emissions from these 160 facilities assumed to be subject to the final rulemaking totaled 4,552 tons in 2012. Of the 160 facilities reporting VOC emissions in 2012, the owners and operators of 139, or 86.9% (139/160), 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 are assumed to emit 2.7 tons or more of actual VOC emissions per 12-month rolling period threshold, including VOC emissions from related cleaning activities, before consideration of controls, and will be required to implement VOC emission reduction measures, work practice standards, and recordkeeping requirements. The records must 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 facilities, or 13.1% (21/160), reported VOC emissions below 2.7 tons; their combined reported emissions totaled 21 tons in 2012. If the VOC emissions at each of these 21 facilities remain below 2.7 tons per year, the owners and operators of these 21 facilities will be subject only to the recordkeeping requirements and, if requested by the Department, reporting requirements of this final rulemaking. If the VOC emissions at any of these facilities equal or exceed 2.7 tons per year at any time, the owner and operator of the facility become subject to all of the applicable requirements and remain subject to all of the applicable requirements even if the VOC emissions subsequently fall below 2.7 tons per year.

A review of the U.S. SBA Small Business Size Regulations under 13 CFR Chapter 1, Part 121 provided the standard used by the Department for determining what constitutes a small business for these NAICS categories. The small business size standard for most of these NAICS categories was based on number of employees and ranged from 500 to 1,500 employees; that is, the business could have as many as 500 to 1,500 employees and be considered a small business. In a few instances the small business-size standard for the affected NAICS code was annual product sales in the millions of dollars. The SBDC EMAP reviewed the list of 160 potentially subject facilities reporting VOC emissions in 2012 identified by the Department from its databases and determined which of the 160 facilities were considered a small business under the SBA Small Business Size Regulations using the number of employees as the criterion. Employee data could not be found for 58 of the 160 facilities. For the remaining 102 facilities (160 - 58), all but three met the definition of small business for these NAICS codes under the SBA Small Business Size Regulations based on number of employees. The owners and operators of these three non-small-business-sized facilities

reported a combined total of 78.5 tons of actual VOC emissions in 2012, or 2% of the total 4,552 tons of actual VOC emissions reported in 2012 from these sources. The remaining 4,473.5 tons of actual VOC emissions, or 98%, emitted in 2012 by these sources, therefore, were from small business-sized facilities.

As these data demonstrate, the owner and operator of a facility in this industry sector 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 RACT measures consistent with the recommendations of the 2008 MMPP CTG for the control of those VOC emissions. A RACT regulation is a Federal CAA requirement, applicable to the owners and operators of all affected sources that meet the applicable VOC emission thresholds regardless of business size.

It is possible that the final rulemaking may also apply to owners and operators of other facilities that perform surface coating of miscellaneous metal parts or miscellaneous plastic parts that have not yet been identified, because the HAP emission reduction measures of the 2004 NESHAPs 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 miscellaneous metal parts surface coating facilities or miscellaneous plastic parts surface coating facilities are, therefore, not currently required to implement the HAP emission reduction measures provided in the 2004 NESHAPs and would not have been issued a Title V permit by the Department incorporating these measures as applicable requirements.

In addition to the facilities identified by the Department, the SBDC EMAP provided the Department with a list of 6,624 small business-sized facilities in this Commonwealth identified by the NAICS codes provided in the EPA's final rule notices promulgating the 2004 NESHAPs. Using the percentages developed from analysis of the list of 344 miscellaneous metal parts and miscellaneous plastic parts facilities generated by the Department databases and described above, the Department assumed that 46.5% of the 6,624 facilities on the list provided by the SBDC EMAP conduct surface coating of miscellaneous metal parts or miscellaneous plastic parts, including surface coating of automotive and transportation plastic parts, business machine plastic parts, pleasure craft (recreational boats), bodies or body parts for new heavier vehicles, or 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. Accordingly, the owners and operators of 3,080 facilities (46.5% of 6,624 facilities) identified as small businesses by the SBDC EMAP are potentially subject to the final rulemaking. Of these 3,080 facilities, the owners and operators of 2,677 facilities (3,080 x 86.9%) are estimated to have actual VOC emissions at or above the 2.7 tons per 12-month rolling period threshold, including VOC emissions from related cleaning activities, before consideration of controls, and will be required to implement VOC emission reduction measures, work practice standards and recordkeeping requirements, and submit records to the Department upon receipt of a written request. The owners and operators of the remaining 403 facilities (3,080 – 2,677 facilities, or 13.1%) are assumed to have actual VOC emissions below the 2.7 tons per 12-month rolling period threshold, including VOC emissions from related cleaning activities, before consideration of controls, and will be subject only to the recordkeeping requirements and, if requested by the Department, reporting requirements of the final rulemaking. It should be noted, however, that of the 3,080 small business-sized facilities assumed to be subject to the final rulemaking, many may not conduct surface coating of miscellaneous metal parts or miscellaneous plastic parts, or may conduct surface coating that is subject to another surface coating regulation in 25 Pa. Code, Chapter 129, and therefore will not be subject to the final rulemaking. Therefore, the projected number of 3,080 potentially subject small business-sized facilities is likely higher than the number of small business-sized facilities that will actually be subject to the final rulemaking.



The difference in estimated projected number of facilities with VOC emissions equal to or more than 2.7 tons per 12-month rolling period between the Department's list of 139 potentially affected permitted facilities and the SBDC EMAP's list of 2,677 potentially affected small business-sized facilities is likely due to the Department's database being for the owners and operators of previously and currently permitted facilities based on regulatory criteria for acquiring a permit, while the SBDC EMAP list is based on a self-reported business classification by owners and operators about their small-business-sized facility without considering the level of VOC emissions. Most of the owners and operators of the permitted facilities in the Department's database have actual emissions, or the potential to have emissions, at or above 8 tons per year of VOCs, or installed a new source emitting over 2.7 tons VOC emissions per year, thus requiring a permit.

The recommended RACT VOC emission reduction measures included in the 2008 MMPP CTG are largely based on the 2004 NESHAPs HAP emission reduction measures. While the owner or operator of a miscellaneous metal parts surface coating facility or miscellaneous plastic parts surface coating facility area source of HAP may not meet the threshold for implementing the HAP emission reduction measures of the 2004 NESHAPs, the owner or operator may meet the applicability threshold limit for implementing the final rulemaking measures to control VOC emissions. If the final rulemaking applies to the owners and operators of facilities that have not yet been identified, they will likely be small businesses, as shown above in the discussion of the 344 facilities identified by the Department from its databases. The small business size standard for most of these NAICS categories was based on number of employees and ranged from 500 to 1,500 employees. While a business employing as many as 500 to 1,500 employees could be considered a small business under the Federal Small Business Size regulations, a facility or surface coating operation employing 500 to 1,500 employees could be creating a lot of product and generating large amounts of VOC emissions. Implementing a RACT regulation is a Federal CAA requirement. The RACT regulation must apply to the owners and operators of all affected sources that meet the applicable VOC emission thresholds, regardless of business size.

The EPA based its cost effectiveness information in the 2008 MMPP CTG on the analysis it performed for the 2004 NESHAPs. The EPA assumed that the owners and operators of facilities subject to the 2008 MMPP 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.<sup>8</sup> Costs are likely to be even lower than the low end that the EPA and the Department estimate, because most of the low-HAP content and low-VOC content materials are already developed and available compared to 8 years ago when the EPA published the 2008 MMPP CTG.

The EPA identified 1,296 facilities in ozone nonattainment areas Nationwide as potentially subject to the levels of control recommended in the 2008 MMPP CTG. The EPA applied the NESHAP-derived cost of \$10,500 per facility to the number of facilities it identified Nationwide to calculate a total estimated cost of implementation. Multiplying \$10,500 x 1,296 facilities equals a total cost of \$13.6 million, based on the reformulation of high-VOC content coating materials to low-VOC content coating materials and use of low-

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<sup>8</sup> See *Control Techniques Guidelines for Miscellaneous Metal and Plastic Parts Coatings*, EPA-453/R-08-003, pages 39-40

VOC content coating materials.<sup>9</sup> The EPA estimated that the VOC control measure recommendations in the 2008 MMPP CTG would reduce VOC emissions from the 1,296 facilities by 35%, or 7,738 tpy. Dividing \$13.6 million by 7,738 tpy equals a cost of \$1,758 per ton of VOC emissions reduced.

Section 129.52d(d)(1) in the final-form regulation provides as one compliance option the use of individual compliant coating materials. Coatings that are compliant with the HAP content limits and emission rate limits of the 2004 NESHAPs and with the final rulemaking VOC content limits and emission rate limits in subsection (d) are readily available to the owners and operators of all sizes of subject facilities. Subsection (d)(2) provides 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. Subsection (d)(3) provides 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. 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 coating processes subject to this final rulemaking.

The VOC emission limitations and other requirements established by this final rulemaking do not require the submission of applications for amendments to existing operating permits. These requirements will 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 will be incorporated as applicable requirements in the permit within 18 months of the promulgation of the final rulemaking, as required under § 127.463(b). Most importantly, § 127.463(e) specifies that "[r]egardless of whether a revision is required under this section, the permittee shall meet the applicable standards or regulations promulgated under the Clean Air Act within the time frame required by standards or regulations." Consequently, upon promulgation as a final-form regulation, the requirements will apply to affected owners and operators irrespective of a modification to the Operating Permit.

New legal, accounting or consulting procedures will 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.**

The final rulemaking applies to the owner and operator of a miscellaneous metal part surface coating process or miscellaneous plastic part surface coating process, or both, that surface coats automotive and transportation plastic parts, business machine plastic parts, pleasure craft (recreational boats), or bodies or body parts for new heavier vehicles, as well as to the owner and operator of 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. The Department reviewed its databases and identified 160 facilities whose owners and operators may be subject to the final rulemaking. Of the 160 potentially subject facilities, the owners and operators of 99 facilities were identified as small businesses under the SBA Small Business Size Regulations under 13 CFR Chapter 1, Part 121, and the owners and operators of three facilities were

<sup>9</sup> See *Control Techniques Guidelines for Miscellaneous Metal and Plastic Parts Coatings*, EPA-453/R-08-003, pages 39-40.

identified as not being small businesses. Data could not be found for the remaining 58 facilities to determine if the owners and operators were considered a small business.

The SBDC EMAP provided the Department with a list of 6,624 small business-sized facilities in this Commonwealth identified by the NAICS codes provided in the EPA's final rule notices promulgating the 2004 NESHAPs. Using the percentages developed from the list of facilities generated by its databases and described in the response to Question 15, the Department assumed that 46.5% of the 6,624 facilities on the list provided by the SBDC EMAP conduct miscellaneous metal parts surface coating or miscellaneous plastic parts surface coating. Accordingly, the owners and operators of 3,080 facilities (46.5% of 6,624 facilities) identified as small businesses may potentially be subject to the final rulemaking if their VOC emissions meet the applicability threshold of 2.7 tons of VOC emissions per 12-month rolling period. It should be noted that the owners and operators of many of the 3,080 small business-sized facilities assumed to be subject to the final rulemaking may not conduct surface coating of miscellaneous metal parts or miscellaneous plastic parts, or may do surface coating that is subject to another surface coating regulation in 25 Pa. Code, Chapter 129 and therefore may not be subject to the final rulemaking. Therefore, the projected number of 3,080 potentially subject small business-sized facilities is likely higher than the number of small business-sized facilities that may actually be subject to the final rulemaking.

It is possible that the final rulemaking may also apply to owners and operators of other facilities that have not yet been identified, because the 2004 NESHAPs do 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).

Please also see the response to Question 15 for more detail.

**(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.**

The EPA based its cost effectiveness information in the 2008 MMPP CTG on the analysis it performed for the 2004 NESHAPs. The EPA assumed that the owners and operators of facilities subject to the 2008 MMPP 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 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 use of low-HAP content coating materials.

The EPA identified 1,296 facilities in ozone nonattainment areas Nationwide as potentially subject to the levels of control recommended in the 2008 MMPP CTG. The EPA applied the NESHAP-derived cost of \$10,500 per facility to the number of facilities it identified Nationwide to calculate a total estimated cost of implementation. Multiplying \$10,500 x 1,296 facilities equals a total cost of \$13.6 million Nationwide, based on the reformulation and use of low-VOC content coating materials. The EPA stated in the 2008 MMPP CTG that it estimates that implementing the recommended VOC control measures would reduce the emissions of VOC from the 1,296 facilities that emit above the threshold of 15 pounds per day [or

equivalent 2.7 tons per 12-month rolling period] by 35%, or 7,738 tpy.<sup>10</sup> Dividing \$13.6 million by 7,738 tpy equals a cost of \$1,758 per ton of VOC emissions reduced Nationwide under the 2008 MMPP CTG.

As discussed in the response to Question 15, the Department estimates that the owners and operators of 139 facilities in this Commonwealth each emit 2.7 tons or more of actual VOC emissions per 12-month rolling period threshold, including VOC emissions from related cleaning activities, before consideration of controls. The combined reported VOC emissions of these facilities totaled 4,531 tons in 2012. Using the 35% emission reduction estimate that the EPA used for the Nationwide estimate, implementation of the recommended VOC emission control measures may generate reductions of as much as 1,586 tons (4,531 tons x 35%) of VOC emissions per 12-month rolling period from these 139 facilities.

The Department calculated the estimated maximum annual cost that may be incurred by the owners and operators of the 139 potentially affected facilities in this Commonwealth on a facility basis by using the EPA's cost effectiveness number of \$1,758 per ton of VOC emissions reduced on an annual basis. Multiplying \$1,758/ton of VOC emissions reduced x 1,586 tons of VOC emissions reduced equals total combined costs of approximately \$2.8 million for the owners and operators of the 139 facilities on an annual basis. The average estimated cost per facility to implement the final-form VOC control measures is \$2.8 million divided by 139 facilities, which equals approximately \$20,000 per year per facility. This estimated cost of \$20,000 per year per facility is higher than the EPA's estimate of \$10,500 per year per facility. This may be due in part to the Commonwealth-specific emission data used in the calculation.

The Department 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 year 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 is 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.

The Department therefore estimates that the range of cost effectiveness to the regulated industry for implementing the final rulemaking is \$920/ton of VOC emissions reduced to \$1,758/ton of VOC emissions reduced on an annual basis. The range of cost per regulated facility for implementing the final-form VOC emission control measures is estimated to be \$10,500 to \$20,000 per year per facility. The Department expects that the annual costs to the regulated industry in this Commonwealth will be at the lower end of these ranges because low-VOC content coating materials are readily available at a cost that is not significantly greater than the high-VOC content coatings 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 will not be a factor in the cost of complying with the final rulemaking VOC emission control measures.

The Department estimates a similar cost-effectiveness for small businesses. Extrapolating the amount of total VOC emissions, 4,531 tons, including VOC emissions from related cleaning activities, before consideration of controls, from the 139 facilities identified in the Department's databases as emitting at or above the 2.7 tons per 12-month rolling period to the potentially subject 2,677 small business-sized facilities identified by the SBDC EMAP that may have actual VOC emissions at or above the 2.7 tons per 12-month rolling period threshold, including VOC emissions from related cleaning activities, before consideration of

<sup>10</sup> See *Control Techniques Guidelines for Miscellaneous Metal and Plastic Parts Coatings*, pages 32 and 40.

controls, projects total VOC emissions of 87,262 tons from these sources (139 facilities/4,531 tons of VOC emissions = 2,677 facilities / X tons of VOC emissions). Implementation of the recommended control measures may generate potential VOC emission reductions of 30,542 tons per 12-month rolling period (87,262 tons of VOC emissions x 35%) from the 2,677 potentially subject small business-sized facilities identified by the SBDC EMAP.

The Department calculated the estimated maximum annual cost that may be incurred by the owners and operators of the 2,677 potentially affected small business-sized facilities in this Commonwealth on a facility basis by using the EPA's cost effectiveness number of \$1,758 per ton of VOC emissions reduced. Multiplying \$1,758/ton of VOC emissions reduced x 30,542 tons of VOC emissions reduced equals total combined costs of approximately \$53.7 million for the owners and operators of the 2,677 facilities. The cost per facility is \$53.7 million divided by 2,677 facilities, which equals approximately \$20,000 per facility to implement the final-form VOC control measures. This cost of \$20,000 per facility is higher than the EPA's estimate of \$10,500 per facility.

The Department also calculated the cost effectiveness for the owners and operators of the 2,677 potentially affected small business-sized facilities in this Commonwealth using the EPA's cost of \$10,500 per facility. The estimated total maximum anticipated annual costs to the potentially subject owners and operators of regulated small businesses could be up to \$28 million (\$10,500 x 2,677 facilities). Therefore, the cost effectiveness for the reductions of 30,542 tons of VOC emissions is approximately \$920 per ton of VOC emissions reduced (\$28 million/30,452 tons) on an annual basis, which again is lower than the EPA estimate of \$1,758 per ton of VOC emissions reduced on an annual basis.

The Department therefore estimates that the range of cost effectiveness to the small business-sized regulated industry for implementing the final rulemaking is \$920/ton of VOC emissions reduced to \$1,758/ton of VOC emissions reduced. The range of cost per small business-sized regulated facility for implementing the final-form VOC emission control measures is estimated to be \$10,500 per facility to \$20,000 per facility. The Department expects that the costs to the small business-sized regulated industry in this Commonwealth will be at the lower end of these ranges because low-VOC content coating materials are readily available at a cost that is not significantly greater than the high-VOC content coatings 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 will not be a factor in the cost of complying with the final rulemaking VOC emission control measures.

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 final rulemaking and, if so, will have no additional annual costs. Section 129.52d(d)(1) in the final-form regulation provides as one compliance option the use of individual compliant coating materials. Coatings that are compliant with the 2004 NESHAPs HAP content limits and with the final rulemaking VOC content limits are readily available to the owners and operators of all sizes of affected facilities. Subsection (d)(2) provides 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. Subsection (d)(3) provides 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. However, because

of the wide availability and lower cost (compared to installation and operation of VOC emission 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 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 for affected owners and operators for cleaning materials and cleaning activities. 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.

The recordkeeping and reporting requirements for owners and operators at, above, or below the threshold for control measures should be minimal because the records required by the final rulemaking are in line with what the industry currently tracks for inventory purposes or in current permits. The owner or operator of a facility subject to the final rulemaking is required to maintain records sufficient to demonstrate compliance with the applicable requirements. The records shall be maintained onsite 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). Records maintained for compliance demonstrations may include purchase, use, production and other records.

Implementation of the VOC emission control measures in the final rulemaking may 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 and as much as 30,542 tons per 12-month rolling period from the 2,677 potentially subject small business-sized facilities identified by the SBDC EMAP, 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 will 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 will 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 final rulemaking is designed primarily to address ozone air quality, the reformulation 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 will 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 final 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 use VOC emissions capture systems and add-on air pollution control devices 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.

Please also see the response to Question 18.

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

The benefits of the final rulemaking to the public health and welfare are expected to outweigh the costs that may be incurred by affected owners and operators as a result of implementing the final rulemaking control measures. As explained in the responses to Questions 17 and 19, the range of cost effectiveness of implementing the final-form VOC emission control measures is estimated to be \$920 to \$1,758 per ton of VOC emissions reduced on an annual basis from affected facilities. Also as explained in the responses to Questions 17 and 19, the maximum anticipated total annual costs to the owners and operators of the potentially subject facilities range from \$1.46 million to \$2.8 million for the 139 facilities identified by the Department in its databases and from \$28 million to \$53.7 million for the 2,677 potentially subject small business-sized facilities identified by the SBDC EMAP. The Department expects that the costs to the known regulated industry and to the small business-sized regulated industry in this Commonwealth will be at the lower end of these ranges because low-VOC content coating materials are 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 will not be a factor in the cost of complying with the final rulemaking VOC emission control measures.

As discussed in the response to Question 10, the EPA has estimated the monetized health benefits of attaining the 2008 8-hour ozone NAAQS of 0.075 ppm to range from \$8.3 billion to \$18 billion on a National basis by 2020. Prorating that benefit to the Commonwealth, based on population, results in a public health benefit of \$337 million to \$732 million. The EPA estimated that the monetized health benefits of attaining the 2015 8-hour ozone NAAQS of 0.070 ppm range from \$1.5 billion to \$4.5 billion on a National basis by 2025.<sup>11</sup> Prorating that benefit to the Commonwealth, based on population, results in a public health benefit of \$63 million to \$189 million. The Department is not stating that these estimated monetized health benefits would all be the result of implementing the final 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 2008 and 2015 8-hour ozone NAAQS.

The estimated annual costs of \$1.46 million to \$2.8 million, collectively, that may be incurred by the owners and operators of the 139 potentially affected facilities identified by the Department and the estimated annual costs of \$28 million to \$53.7 million, collectively, that may be incurred by the owners and operators of the 2,677 potentially affected small business-sized facilities identified by the SBDC EMAP for implementing the final-form VOC emission control measures are low in comparison to the potential economic gains in public health and welfare to Commonwealth residents of attaining and maintaining the 2008 and 2015 8-hour ozone NAAQS.

Further, as discussed in the response to Question 10, the economic benefits to the Commonwealth's agricultural and hardwoods industries, which have total annual economic impacts of \$75 billion and \$18.4 billion respectively, of attaining and maintaining the ozone NAAQS through reduced emissions of ozone precursors from surface coating processes subject to this final rulemaking, outweigh the estimated maximum annual costs of \$1.46 million to \$2.8 million that may be incurred collectively by the owners and operators of the 139 potentially affected facilities identified by the Department and the estimated annual costs of \$28 million to \$53.7 million that may be incurred collectively by the owners and operators of the 2,677 potentially affected small business-sized facilities identified by the SBDC EMAP.

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<sup>11</sup> *Regulatory Impact Analysis of the Final Revisions to the National Ambient Air Quality Standards for Ground-Level Ozone*, September 2015, <https://www3.epa.gov/ttn/naaqs/standards/ozone/data/20151001ria.pdf>.

**(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.**

The cost of complying with the requirements in the final rulemaking includes the cost of using low-VOC content coating materials; VOC emission capture systems and add-on air pollution control devices; or a combination of these two approaches.

The 2008 MMPP CTG provided VOC emission reduction cost-effectiveness information based on the 2004 NESHAPs. The EPA assumed that all owners and operators of facilities subject to the total actual VOC emissions applicability threshold of 15 pounds per day or the equivalent 2.7 tons per 12-month rolling period, including VOC emissions from related cleaning activities, 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 EPA used the 2004 NESHAPs costs for reformulation to low-HAP content coating materials because these costs are thought to be similar to the costs for reformulation to low-VOC content coating materials. The EPA determined that the annual costs averaged across all sizes of facilities subject to the CTG to be estimated at \$10,500 per facility and the cost effectiveness to be \$1,758 per ton of VOC emissions reduced.

The EPA stated in the 2008 MMPP CTG that it estimates that implementing the recommended control measures would reduce the emissions of VOC from affected facilities that emit above the threshold of 15 pounds per day [or equivalent 2.7 tons per 12-month rolling period] by 35%. Implementation of the recommended control measures may 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 VOC emissions from related cleaning activities, before consideration of controls and, therefore, are required to implement the final-form VOC emission reduction control measures.

The Department calculated the estimated maximum annual cost that may be incurred by the owners and operators of the 139 potentially affected facilities in this Commonwealth on a facility basis by using the EPA's cost effectiveness number of \$1,758 per ton of VOC emissions reduced on an annual basis. Multiplying \$1,758/ton of VOC emissions reduced x 1,586 tons of VOC emissions reduced equals total combined costs of approximately \$2.8 million for the owners and operators of the 139 facilities on an annual basis. The average estimated cost per facility to implement the final-form VOC control measures is \$2.8 million divided by 139 facilities, which equals approximately \$20,000 per year per facility. This estimated cost of \$20,000 per year per facility is higher than the EPA's estimate of \$10,500 per year per facility. This difference in cost per year per facility may be due in part to the Commonwealth-specific emission data used in the calculation.

The Department 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 year 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 will 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. This difference in cost effectiveness may be due in part to the Commonwealth-specific emission data used in the calculation.



Extrapolating the amount of total VOC emissions, 4,531 tons, including VOC emissions from related cleaning activities, before consideration of controls, from the 139 facilities identified in the Department's databases as emitting at or above the 2.7 tons per 12-month rolling period to the potentially subject 2,677 small business-sized facilities identified by the SBDC EMAP that could have actual VOC emissions at or above the 2.7 tons per 12-month rolling period threshold, including VOC emissions from related cleaning activities, before consideration of controls, projects total VOC emissions of 87,262 tons from these sources (139 facilities/4,531 tons of VOC emissions = 2,677 facilities / X tons of VOC emissions). Implementation of the recommended control measures may generate potential VOC emission reductions of 30,542 tons per 12-month rolling period (87,262 tons x 35%) from the 2,677 potentially subject small business-sized facilities identified by the SBDC EMAP.

The Department calculated the estimated maximum annual cost that may be incurred by the owners and operators of the 2,677 potentially affected small business-sized facilities in this Commonwealth on a facility basis by using the EPA's cost effectiveness number of \$1,758 per ton of VOC emissions reduced annually. Multiplying \$1,758/ton of VOC emissions reduced x 30,542 tons of VOC emissions reduced equals total combined costs of approximately \$53.7 million for the owners and operators of the 2,677 facilities on an annual basis. The cost per facility is \$53.7 million divided by 2,677 facilities, which equals approximately \$20,000 per year per facility to implement the final-form VOC control measures. This cost of \$20,000 per year per facility is higher than the EPA's estimate of \$10,500 per year per facility.

The Department also calculated the cost effectiveness for the owners and operators of the 2,677 potentially affected small business-sized facilities in this Commonwealth using the EPA's cost of \$10,500 per year per facility. The estimated total maximum anticipated annual costs to the potentially subject owners and operators of regulated small businesses could be up to \$28 million (\$10,500 x 2,677 facilities). Therefore, the cost effectiveness for the reductions of 30,542 tons of VOC emissions will be approximately \$920 per ton of VOC emissions reduced (\$28 million/30,542 tons) on an annual basis, which again is lower than the EPA estimate of \$1,758 per ton of VOC emissions reduced on an annual basis.

The Department, therefore, estimates that the range of cost effectiveness to the regulated industry for implementing the final rulemaking is \$920/ton of VOC emissions reduced to \$1,758/ton of VOC emissions reduced on an annual basis. The range of cost per regulated facility for implementing the final-form VOC emission control measures is estimated to be \$10,500 to \$20,000 per year per facility. The cost per year per facility may be even lower than estimated because low-VOC content coating materials are readily available as a result of the availability of low-HAP content coating materials developed for the owners and operators of facilities subject to the 2004 NESHAPs. Research and development for lower VOC content coating materials should not be needed, since lower HAP coating content usually means lower VOC coating content.

The implementation of the work practices for the use and application of cleaning materials is expected to result in a net cost savings for affected owners and operators for cleaning materials and cleaning activities. 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.

New legal, accounting or consulting procedures will 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 miscellaneous metal parts surface coating or miscellaneous plastic parts surface coating facilities have been identified as being owned by local governments. If a local government does, however, own or operate a miscellaneous metal parts surface coating process or miscellaneous plastic parts surface coating process, or both, additional costs or savings commensurate with those for the private sector, as set forth above in response to Questions 17 and 19, may be experienced.

**(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 miscellaneous metal parts surface coating or miscellaneous plastic parts surface coating facilities have been identified as being owned by state government. If a state government agency does, however, own or operate a miscellaneous metal parts surface coating process or miscellaneous plastic parts surface coating process, or both, additional costs or savings commensurate with those for the private sector, as set forth above in response to Questions 17 and 19, may be experienced.

**(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.**

	<b>Current FY Year 15/16</b>	<b>FY+1 Year 16/17</b>	<b>FY+2 Year 17/18</b>	<b>FY+3 Year 18/19</b>	<b>FY+4 Year 19/20</b>	<b>FY+5 Year 20/21</b>
<b>SAVINGS:</b>	\$	\$	\$	\$	\$	\$
<b>Regulated Community</b>		0.00	0.00	0.00	0.00	0.00
<b>Local Government</b>	0.00	0.00	0.00	0.00	0.00	0.00
<b>State Government</b>		0.00	0.00	0.00	0.00	0.00
<b>Total Savings</b>	0.00	0.00	0.00	0.00	0.00	0.00
<b>COSTS:</b>	\$	\$	\$	\$	\$	\$
<b>Regulated Community</b>	0.00	0.73 million to 1.4 million	1.46 million to 2.8 million	1.46 million to 2.8 million	1.46 million to 2.8 million	1.46 million to 2.8 million
<b>Local Government</b>	0.00	0.00	0.00	0.00	0.00	0.00
<b>State Government</b>	0.00	0.00	0.00	0.00	0.00	0.00

<b>Total Costs</b>	0.00	0.73 million to 1.4 million	1.46 million to 2.8 million	1.46 million to 2.8 million	1.46 million to 2.8 million	1.46 million to 2.8 million
<b>REVENUE LOSSES:</b>	\$	\$	\$	\$	\$	\$
<b>Regulated Community</b>	0.00	0.00	0.00	0.00	0.00	0.00
<b>Local Government</b>	0.00	0.00	0.00	0.00	0.00	0.00
<b>State Government</b>	0.00	0.00	0.00	0.00	0.00	0.00
<b>Total Revenue Losses</b>	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.**

<b>Program</b>	<b>FY-3 (12/13)</b>	<b>FY-2 (13/14)</b>	<b>FY-1 (14/15)</b>	<b>Current FY (15/16)</b>
Environmental Program Management (161-10382)	\$24,965,000	\$25,733,000	\$28,517,000	\$28,277,000
Clean Air Fund Major Emission Facilities (215-20077)	\$18,464,000	\$18,413,000	\$16,870,000	\$22,039,000
Clean Air Fund Mobile and Area Facilities (233-20084)	\$10,198,000	\$8,036,000	\$9,811,000	\$10,250,000

**(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.**

The final rulemaking applies to the owner and operator of a miscellaneous metal part surface coating process or miscellaneous plastic part surface coating process, or both. The Department reviewed its databases and identified 160 facilities whose owners and operators may be subject to the final rulemaking. Of the 160 potentially subject facilities, the owners and operators of 99 facilities were identified as small businesses under the SBA Small Business Size Regulations under 13 CFR Chapter 1, Part 121, and the owners and operators of three facilities were identified as not being small businesses. Data could not be found for the remaining 58 facilities to determine if the owners and operators were considered a small business.

The SBDC EMAP provided the Department with a list of 6,624 small business-sized facilities in this Commonwealth identified by the NAICS codes provided in the EPA's final rule notices promulgating the 2004 NESHAPs. Using the percentages developed from the list of facilities generated by the Department's databases and described in the response to Question 15, the Department assumed that 46.5% of the 6,624 facilities on the list provided by the SBDC EMAP do miscellaneous metal parts surface coating or miscellaneous plastic parts surface coating. Accordingly, the owners and operators of 3,080 facilities (46.5% of 6,624 facilities) identified as small businesses may potentially be subject to the final rulemaking. It should be noted that the owners and operators of many of the 3,080 small business-sized facilities

assumed to be subject to the final rulemaking may not do surface coating of miscellaneous metal parts or miscellaneous plastic parts, or may perform surface coating processes that are subject to another surface coating regulation in 25 Pa. Code, Chapter 129 and therefore will not be subject to the final rulemaking. Therefore, the projected number of 3,080 potentially subject small business-sized facilities is likely higher than the number of small business-sized facilities that will actually be subject to the final rulemaking.

It is possible that the final rulemaking may also apply to owners and operators of other facilities that have not yet been identified. If the final rulemaking does apply to other facilities, they will likely also be small businesses.

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

The recordkeeping and reporting requirements for owners and operators at, above, or below the threshold for control measures should be minimal because the records required by the final rulemaking are in line with what the industry currently tracks for inventory purposes or in current permits. The owner or operator of a facility subject to the final rulemaking will be required to maintain records sufficient to demonstrate compliance with the applicable requirements. The records must 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. Records maintained for compliance demonstrations may include purchase, use, production and other records. There are no further legal, accounting or consulting procedures established in the final rulemaking.

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

Implementation of the final rulemaking provisions should have minimal impact on the owners and operators of affected small business-sized facilities. The final rulemaking provides flexibility through compliance options. Subsection 129.52d(d)(1) in the final-form regulation provides as one compliance option the use of individual compliant coating materials. Coatings that are compliant with the HAP content limits of the 2004 NESHAPs and with the final rulemaking VOC content limits and emission rate limits are readily available to the owners and operators of all sizes of subject facilities. Subsection (d)(2) provides flexibility in compliance through a 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. Subsection (d)(3) provides 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. 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. Many owners or operators may already be using complying coatings or may be complying through the use of an existing VOC emission capture system and add-on air pollution control device and will not incur additional costs to implement the requirements of the final rulemaking.

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

There are no less intrusive or less costly alternative regulatory provisions available. The Department included flexibilities within the final rulemaking, but the final rulemaking must satisfy the Federal CAA RACT requirements. Implementing a RACT regulation is a Federal CAA requirement. The RACT regulation must apply to the owners and operators of all subject sources that meet the applicable VOC emission thresholds regardless of business size. In accordance with sections 172(c)(1), 182(b)(2)(A) and 184(b)(1)(B) of the CAA, the final rulemaking establishes VOC emission limitations and other requirements consistent with the recommendations of the EPA 2008 MMPP 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.

**(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 subject facility that performs surface coating of miscellaneous metal parts or miscellaneous plastic parts, will not be affected by the final rulemaking. For those that might be owners or operators of a subject facility, no special provisions are necessary. As explained above in the response to Question 15, compliant low-VOC content materials are readily available to the owners and operators of all sizes of affected facilities and are 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 final rulemaking is considered the least burdensome acceptable method of ensuring compliance with the Federal CAA RACT mandate. In accordance with sections 172(c)(1), 182(b)(2)(A) and 184(b)(1)(B) of the CAA, the final rulemaking establishes VOC emission limitations and other requirements consistent with the recommendations of the EPA 2008 MMPP 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). No other regulatory provisions were considered.

The final rulemaking provides flexibility through compliance options. Section 129.52d(d)(1) in the final-form regulation provides as one compliance option the use of individual compliant coating materials. Coatings that are compliant with the HAP content limits and emission rate limits of the 2004 NESHAPs and with the final rulemaking VOC content limits and emission rate limits are readily available to the owners and operators of all sizes of subject facilities. Subsection (d)(2) provides flexibility in compliance through a 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. Subsection (d)(3) provides 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. 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 of a subject facility to reduce VOC emissions from miscellaneous metal parts surface coating processes or miscellaneous plastic parts surface coating processes.

**(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.**

Minimal adverse impact is expected for the owners and operators of small business-sized facilities because compliant VOC content coating materials are readily available. Less stringent compliance requirements are not available, as the final rulemaking is and must be designed to achieve the RACT requirements of the CAA. The EPA set forth its recommendations for RACT for this industry in its 2008 MMPP CTG. The Department included the least stringent recordkeeping and reporting requirements available that will ensure compliance with the final rulemaking. Recordkeeping is 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.**

Minimal adverse impact is expected for the owners and operators of small business-sized facilities. As explained in the response to Question 9, the final rulemaking is overdue to the EPA for approval as a SIP revision. Further delay of implementation is not recommended or feasible. The final rulemaking provides ample time for the owners and operators of facilities that might be subject to the regulatory requirements to comply.

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

Minimal adverse impact is expected for the owners and operators of small business-sized facilities. The compliance options in the final rulemaking should allow the owners and operators of subject small business-sized facilities to find an acceptable method of compliance appropriate to their operations. Reporting will only be necessary under the final rulemaking if requested in writing by the Department.

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

The final rulemaking includes performance standards. If an owner or operator of an affected facility, including a small business, chooses not to comply solely by using low-VOC content coating materials, the owner or operator may comply by using some low-VOC content coating materials or using a VOC emission capture system and add-on air pollution control device, or both, that meet a specified emission rate. In other words, the final rulemaking provides three different ways to achieve the desired emission levels. Minimal adverse impact is expected for the owners and operators of small business-sized facilities. Low-VOC content coating materials are 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. An owner or operator may also achieve equivalent compliance through an alternative method under the final amendment of § 129.51(a) to extend its applicability to the owner and operator of a coating operation subject to this final rulemaking.

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

Implementing a RACT regulation is a Federal CAA requirement. The RACT regulation must apply 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 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 a regulation designed to implement RACT measures for the control of those VOC emissions.

The owners and operators of small businesses in this industry sector that meet the applicability threshold of the 2008 MMPP CTG may not be exempted from the final-form requirements by this regulation. Nor is there a need to exempt the owners and operators of small businesses from this final rulemaking, as compliant low-VOC content materials are readily available and widely in use.

**(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.**

*Acceptability standards for empirical, replicable, and testable data:*

As explained above in the responses to Questions 9 and 10, the Commonwealth's SIP must include regulations to control VOC emissions from miscellaneous metal and plastic parts coatings. Section 183(e) of the CAA directed the EPA to conduct a study of VOC emissions from the use of consumer and commercial products to assess their potential to contribute to violations of the NAAQS for ozone and to list for regulation those categories of products that account for at least 80% of the aggregate VOC emissions, on a reactivity-adjusted basis, from consumer and commercial products in areas that violate the NAAQS for ozone (namely, ozone nonattainment areas). The EPA published the initial list at 60 FR 15264 (March 23, 1995). The EPA included miscellaneous metal products coatings and plastic parts coatings in this initial list.

Recommended controls for VOC emissions from these materials are included in a CTG issued by the EPA under the following notice, which lists the EPA's determination of product categories for which the EPA would produce CTGs instead of National regulations and which indicated that the EPA was simultaneously issuing final CTGs for these product categories: *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). The CTG applicable to this final rulemaking is the 2008 MMPP CTG.

According to the EPA, the information that the agency used for determining the recommended RACT measures for the control of VOC emissions from miscellaneous metal and plastic parts coatings contained in the 2008 MMPP CTG includes: source VOC emission data; a comprehensive review of current state and local VOC emission reduction approaches for miscellaneous metal and plastic parts coatings; the 1978 CTG for controlling VOC emissions from surface coating of Miscellaneous Metal Parts and Products (EPA-

450/2-78-015); the 1988 New Source Performance Standards (NSPS) for Surface Coating of Plastic Parts for Business Machines; the 1994 Alternative Control Techniques Document: Surface Coating of Automotive/Transportation and Business Machine Plastic Parts; and background information, including the costs of the HAP control approaches, gathered for the 2004 NESHAP for Surface Coating of Miscellaneous Metal Parts and Products, 40 CFR Part 63, Subpart MMMM and the 2004 NESHAP for Surface Coating of Plastic Parts and Products, 40 CFR Part 63, Subpart PPPP. The EPA also used the 2002 National Emissions Inventory (NEI) database to estimate the number of miscellaneous metal product and plastic part manufacturing facilities in the United States and the total amount of actual VOC emissions from these facilities. See the 2008 MMPP CTG, pages 5 and 39.

The Department reviewed the information provided by the EPA in the 2008 MMPP CTG for establishing RACT for the sources that are potentially subject to this final rulemaking, and believes that the data used by the EPA to develop the RACT recommendations meet the acceptability standard for empirical, replicable, and testable data. Additionally, according to the EPA's Scientific Integrity Policy, at [https://www.epa.gov/sites/production/files/2014-02/documents/scientific\\_integrity\\_policy\\_2012.pdf](https://www.epa.gov/sites/production/files/2014-02/documents/scientific_integrity_policy_2012.pdf), the EPA adheres to the 2002 Office of Management and Budget (OMB) Information Quality Guidelines, the 2005 OMB Information Quality Bulletin for Peer Review, the EPA's Quality Policy (CIO 2106) for assuring the collection and use of sound, scientific data and information, the EPA's Peer Review Handbook for internal and external review of scientific products, and the EPA's Information Quality Guidelines for maximizing the transparency, integrity and utility of information published on the Agency's websites.

The Department reviews its own ambient air quality ozone monitoring data for purposes of reporting to the EPA to establish attainment and maintenance of the NAAQS for all areas of this Commonwealth as discussed in the response to Question 9. The Commonwealth's Ambient Air Monitoring Network is operated in accordance with all network design, siting, monitoring and quality assurance requirements set forth in 40 CFR Part 58 (relating to ambient air quality surveillance). All ozone concentration data measured during the ozone monitoring season, which runs from April to October, are subject to comparison with the ozone NAAQS set forth in 40 CFR Part 50 (relating to National primary and secondary ambient air quality standards). Specific guidance on the requirements for quality assurance and quality control of the ozone monitoring network can be found in the EPA's Quality Assurance Handbook for Air Pollution Measurement Systems, Volume II, Ambient Air Quality Monitoring Program, EPA-454/B-13-003, May 2013. The QA Handbook is available on the EPA web site at <http://www.epa.gov/ttnamti1/files/ambient/pm25/qa/QA-Handbook-Vol-II.pdf>.

The following list provides more complete citations for data sources referenced in this Regulatory Analysis Form:

*Alternative Control Techniques Document: Surface Coating of Automotive/Transportation and Business Machine Plastic Parts.* EPA-453/R-94-017. U.S. Environmental Protection Agency, Research Triangle Park, NC, February 1994. <http://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). <http://www.gpo.gov/fdsys/browse/collection.action?collectionCode=FR>

*Control Technique Guidelines for Automobile and Light-Duty Truck Assembly Coatings,* EPA 453/R-08-006, U.S. Environmental Protection Agency, Office of Air Quality Planning and Standards, EPA, September 2008. (2008 ALDT CTG) [www.epa.gov/airquality/ozonepollution/SIPToolkit/ctgs.html](http://www.epa.gov/airquality/ozonepollution/SIPToolkit/ctgs.html).



*Control Techniques Guidelines for Miscellaneous Metal and Plastic Parts Coatings*, EPA 453/R-08-003, U.S. Environmental Protection Agency, Office of Air Quality Planning and Standards, EPA, September 2008. (2008 MMPP CTG) [www.epa.gov/airquality/ozonepollution/SIPToolkit/ctgs.html](http://www.epa.gov/airquality/ozonepollution/SIPToolkit/ctgs.html).

*Control Technique Guidelines for Miscellaneous Metal and Plastic Part Coatings – Industry request for reconsideration*, June 1, 2010, EPA memorandum, Stephen D. Page, Director, U.S. Environmental Protection Agency, Office of Air Quality Planning and Standards, Research Triangle Park, NC, 27711.

*Guideline Series: Control of Volatile Organic Emissions from Existing Stationary Sources – Volume VI: Surface Coating of Miscellaneous Metal Parts and Products*. EPA-450/2-78-015. U.S. Environmental Protection Agency, Research Triangle Park, NC, June 1978.

<http://www.epa.gov/airquality/ozonepollution/SIPToolkit/ctgs.html>

*National Emission Standards for Hazardous Air Pollutants for Surface Coating of Miscellaneous Metal Parts and Products*, 40 CFR Part 63, Subpart MMMM (relating to National emission standards for hazardous air pollutants for surface coating of miscellaneous metal parts and products) (2004 NESHAP), set forth at 40 CFR 63.3880—63.3981.

<http://www.gpo.gov/fdsys/browse/collectionCfr.action?collectionCode=CFR>

*National Emission Standards for Hazardous Air Pollutants for Surface Coating of Plastic Parts and Products*, 40 CFR Part 63, Subpart PPPP (relating to National emission standards for hazardous air pollutants for surface coating of plastic parts and products) (2004 NESHAP), set forth at 40 CFR 63.4480—63.4581. <http://www.gpo.gov/fdsys/browse/collectionCfr.action?collectionCode=CFR>

North American Industry Classification Standards, <http://www.census.gov/eos/www/naics/> and <http://www.naics.com/>.

Pennsylvania Hardwoods Development Council Biennial Report, 2009-2010, Pennsylvania Hardwoods Development Council, Department of Agriculture. Copy available from the Bureau of Air Quality upon request.

Pennsylvania Hardwoods Development Council, Photo, *Pennsylvania Hardwood Leading the Nation*. Copy available from the Bureau of Air Quality upon request.

*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://www.eenews.net/assets/2011/10/04/document\\_gw\\_02.pdf](http://www.eenews.net/assets/2011/10/04/document_gw_02.pdf).

*Regulatory Impact Analysis of the Final Revisions to the National Ambient Air Quality Standards for Ground-Level Ozone*, September 2015, U.S. Environmental Protection Agency, Office of Air and Radiation, Office of Air Quality Planning and Standards, Research Triangle Park, NC 27711,

<https://www3.epa.gov/ttn/naaqs/standards/ozone/data/20151001ria.pdf>

*Standards of Performance for Industrial Surface Coating: Surface Coating of Plastic Parts for Business Machines. Applicable to affected facilities for which construction, modification, or reconstruction begins after January 8, 1986*. 40 CFR 60 Subpart TTT.

<http://www.gpo.gov/fdsys/browse/collectionCfr.action?collectionCode=CFR>

*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).

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

- |   |                                     |
|---|-------------------------------------|
| A. The date by which the agency must receive public comments:                               | <u>October 13, 2015</u>             |
| B. The date or dates on which public meetings or hearings were held:                        | <u>September 8, 9, and 10, 2015</u> |
| C. The expected date of promulgation of the proposed regulation as a final-form regulation: | <u>4th Quarter 2016</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>January 1, 2017</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.