

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

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

The Environmental Quality Board (Board, EQB) amends Chapter 129 (relating to standards for sources) to read as set forth in Annex A. The final-form rulemaking adds § 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-form 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.

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

This final-form rulemaking is given under Board order at its meeting of _____, 2016.

A. Effective Date

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

B. Contact Persons

For further information, contact Kirit Dalal, Chief, Division of Air Resource Management, Bureau of Air Quality, Rachel Carson State Office Building, P. O. Box 8468, Harrisburg, PA 17105-8468, (717) 772-3436; or Jesse C. Walker, Assistant Counsel, Bureau of Regulatory Counsel, Rachel Carson State Office Building, P. O. Box 8464, Harrisburg, PA 17105-8464, (717) 787-7060. Persons with a disability may use the Pennsylvania AT&T Relay Service, (800) 654-5984 (TDD users) or (800) 654-5988 (voice users). This final-form rulemaking is available on the Department of Environmental Protection's (Department) web site at www.dep.pa.gov (select "Public Participation," then select "Environmental Quality Board (EQB)").

C. Statutory Authority

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

D. Background and Purpose

The purpose of this final-form rulemaking is to implement control measures to reduce 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.

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

VOCs are precursors for ground-level ozone formation. Ground-level ozone, a public health and welfare hazard, is not emitted directly to the atmosphere from these sources, but forms from a photochemical reaction between VOCs and nitrogen oxides (NO_x) in the presence of sunlight. In accordance with sections 172(c)(1), 182(b)(2)(A) and 184(b)(1)(B) of the CAA (42 U.S.C.A. §§ 7502(c)(1), 7511a(b)(2)(A) and 7511c(b)(1)(B)), the final-form rulemaking establishes VOC emission limitations and other requirements consistent with the recommendations of the EPA 2008 Miscellaneous Metal and Plastic Parts Coatings Control Techniques Guidelines (2008 MMPP CTG) for these sources in this Commonwealth. See Consumer and Commercial Products, Group IV: Control Techniques Guidelines in Lieu of Regulations for Miscellaneous Metal Products Coatings, Plastic Parts Coatings, Auto and Light-Duty Truck Assembly Coatings, Fiberglass Boat Manufacturing Materials, and Miscellaneous Industrial Adhesives, 73 FR 58481, 58483 (October 7, 2008).

The EPA is responsible for establishing National Ambient Air Quality Standards (NAAQS) for six criteria pollutants considered harmful to public health and welfare, including the environment: ground-level ozone, particulate matter, NO_x, carbon monoxide, sulfur dioxide and

lead. Section 109 of the CAA (42 U.S.C.A. § 7409) established two types of NAAQS: primary standards, which are limits set to protect public health; and secondary standards, which are limits set to protect public welfare and the environment, including protection against visibility impairment and from damage to animals, crops, vegetation and buildings. The EPA established primary and secondary ground-level ozone NAAQS to protect public health and welfare.

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

In July 1997, the EPA promulgated primary and secondary ozone NAAQS at a level of 0.08 part per million (ppm) averaged over 8 hours. See 62 FR 38856 (July 18, 1997). In 2004, the EPA designated 37 counties in this Commonwealth as 8-hour ozone nonattainment areas for the 1997 8-hour ozone NAAQS. Based on the ambient air monitoring data for the 2014 and 2015 ozone seasons, all monitored areas of this Commonwealth are attaining the 1997 8-hour ozone NAAQS. Maintenance plans have been submitted to the EPA and approved for the 1997 ozone NAAQS. In accordance with the CAA, the maintenance plans include permanent and enforceable control measures that will provide for the maintenance of the ozone NAAQS for at least 10 years following the EPA's redesignation of the areas to attainment. Eight years after the EPA redesignates an area to attainment, 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 primary and secondary ozone NAAQS to 0.075 ppm averaged over 8 hours to provide even greater protection for children, other at-risk populations and the environment against the array of ground-level ozone-induced adverse health and welfare effects. See 73 FR 16436 (March 27, 2008). In April 2012, the EPA designated five areas in this Commonwealth as nonattainment for the 2008 ozone NAAQS. See 77 FR 30088, 30143 (May 21, 2012). These areas include all or a portion of Allegheny, Armstrong, Berks, Beaver, Bucks, Butler, Carbon, Chester, Delaware, Fayette, Lancaster, Lehigh, Montgomery, Northampton, Philadelphia, Washington and Westmoreland Counties. The Department's analysis of 2014 ambient air ozone concentrations 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 indicate that all areas of this Commonwealth, including the Harrison sampler, are monitoring attainment of the 2008 ozone NAAQS as well. 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 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 this Commonwealth 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.

Reductions in VOC emissions that are achieved following the adoption and implementation of VOC RACT emission control measures for source categories covered by CTGs, including miscellaneous metal parts surface coating processes, miscellaneous plastic parts surface coating processes and pleasure craft surface coatings, will allow the Commonwealth to make progress in achieving and maintaining the 1997, 2008 and 2015 8-hour ozone NAAQS.

This final-form rulemaking, which is consistent with the RACT recommendations in the EPA's 2008 MMPP CTG, will reduce VOC emissions from the miscellaneous metal parts surface coating processes, miscellaneous plastic parts surface coating processes and pleasure craft surface coatings categories in ozone nonattainment and maintenance areas in this Commonwealth for those affected sources that do not already comply with the control measures. These final-form VOC emission reduction control measures will assist the Commonwealth in achieving and maintaining the ozone NAAQS Statewide.

There are no Federal statutory or regulatory RACT limits for VOC emissions from these miscellaneous metal parts surface coating processes, miscellaneous plastic parts surface coating processes and pleasure craft surface coatings. In 2004, however, the EPA promulgated 40 CFR Part 63, Subpart MMMM and Subpart PPPP (relating to National emission standards for hazardous air pollutants for surface coating of miscellaneous metal parts and products; and National emission standards for hazardous air pollutants for surface coating of plastic parts and products) (collectively referred to as 2004 NESHAPs). See 69 FR 130 (January 2, 2004) and 69 FR 20968 (April 19, 2004). These 2004 NESHAPs established organic hazardous air pollutant (HAP) emission limits based on low-HAP content coatings and low-volatile-emitting (nonatomizing) coating application technology for the respective surface coating categories.

When developing the control measure recommendations included in its 2008 MMPP CTG for reducing VOC emissions from these sources, the EPA took into account the HAP emission reduction measures of the 2004 NESHAPs for the metal parts and products and the plastic parts and products coating industries. Many HAPs are also VOCs, but not all VOCs are HAPs. The requirements of the 2004 NESHAPs apply to "major sources" of HAP emissions from miscellaneous metal parts and products coating facilities and plastic parts and products coating facilities. For the purpose of regulating HAPs, a "major source" is considered to be a stationary source or group of stationary sources located within a contiguous area and under common

control that emits or has the potential to emit considering controls, in the aggregate, 10 tons per year (tpy) or more of any single listed HAP or 25 tpy or more of any combination of HAPs. See section 112(a)(1) of the CAA (42 U.S.C.A. § 7412(a)(1)). See 69 FR 130, 131 and 69 FR 20968, 20969. Most of the Federal recommendations for control of VOC emissions included in the 2008 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 in the 2004 NESHAPs for these categories.

For pleasure craft surface coatings, the EPA took into account California regulations when developing the 2008 MMPP CTG. California was the only state at that time with regulations governing VOC emissions from pleasure craft surface coatings. After the EPA finalized the 2008 MMPP CTG, the pleasure craft coatings industry asserted to the EPA that three of the VOC emission limits in the CTG were too low considering the performance requirements of the pleasure craft coatings and that the VOC emission limits recommended did not represent RACT for the National pleasure craft coatings industry. The industry suggested several options for revision. The EPA did not take action on the concerns, but left it up to the states to address the concerns. On June 1, 2010, the EPA issued a memorandum entitled "Control Technique Guidelines for Miscellaneous Metal and Plastic Part Coatings—Industry Request for Reconsideration," in which the EPA stated that each state could determine what would be appropriate for the pleasure craft coatings industry in its jurisdiction.

State regulations to control VOC emissions from miscellaneous metal parts surface coating processes, miscellaneous plastic parts surface coating processes and pleasure craft surface coatings, as well as VOC emissions from the related cleaning activities, are required under Federal law. The Commonwealth's 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 (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 (a SIP) to enforce the NAAQS or revision to the NAAQS promulgated under section 109(b) of the CAA. Section 172(c)(1) of the CAA provides that SIPs for nonattainment areas must include "reasonably available control measures," including RACT, for sources of emissions of VOC and NO_x. Section 182(b)(2) of the CAA provides that for moderate ozone nonattainment areas, states must revise their SIPs to include RACT for sources of VOC emissions covered by a CTG document issued by the EPA prior to the area's date of attainment of the applicable ozone NAAQS. More importantly, section 184(b)(1)(B) of the CAA requires that states in the Ozone Transport Region (OTR), including the Commonwealth, submit a SIP revision requiring implementation of RACT for all sources of VOC emissions in the state covered by a specific CTG and not just for those sources that are located in designated nonattainment areas of the state.

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 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 when the EPA determines that the CTG will be "substantially as effective as [National] regulations" in reducing emissions of VOC in ozone nonattainment areas. In 1995, the EPA listed miscellaneous metal products coatings and plastic parts coatings on its section 183(e) list and, in 2008, issued a CTG for these product categories. See 60 FR 15264, 15267 (March 23, 1995) and 73 FR 58481. See *Control Techniques Guidelines for Miscellaneous Metal and Plastic Parts Coatings*, EPA-453/R-08-003, Office of Air Quality Planning and Standards, EPA, September 2008. The 2008 MMPP CTG document is available on the EPA web site at www.epa.gov/airquality/ozonepollution/SIPToolkit/ctgs.html.

In the 2008 notice of final determination and availability of final CTGs, the EPA determined that the RACT 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, as well as pleasure craft surface coatings, in ozone nonattainment areas. See 73 FR 58481. The 2008 MMPP CTG provides states with the EPA's recommendation of what constitutes RACT for the covered categories. States may use the Federal recommendations provided in the CTG to inform their own determination as to what constitutes RACT for VOC emissions from the covered categories. State air pollution control agencies may implement other technically-sound approaches that are consistent with the CAA requirements and the EPA's implementing regulations or guidelines.

The Department reviewed the RACT recommendations 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 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 categories. The Bureau of Air Quality determined that three VOC content limits applicable to the pleasure craft coatings industry should be revised from the limits in the CTG to represent RACT for that industry, based on the June 1, 2010, memorandum from the EPA entitled, "Control Technique Guidelines for Miscellaneous Metal and Plastic Part Coatings—Industry Request for Reconsideration." The EPA wrote the memorandum in response to input from the pleasure craft coatings industry following the EPA's publication of the CTG.

This final-form rulemaking applies to the owner and operator of a facility that manufactures miscellaneous metal parts or products or miscellaneous 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, on which subject surface coatings are applied by the owner and operator, as well as to the owner and operator of a facility that applies subject surface coatings to affected parts and products on a contractual basis. This final-form 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 subject surface coatings are applied to other parts intended for use in new automobiles or new light-duty trucks or to aftermarket repair or replacement parts for automobiles or light-duty trucks.

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

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

The ground-level ozone reduction measures included in this final-form rulemaking may achieve VOC emission reductions locally and may also reduce the transport of VOC emissions and ground-level ozone to downwind states, if implemented for sources of VOC emissions from surface coating processes subject to the final-form rulemaking, as well as for the VOC emissions from related cleaning activities. Adoption of VOC emission control requirements for these sources is part of the Commonwealth's strategy, in concert with other OTR jurisdictions, to further reduce transport of VOC ozone precursors and ground-level ozone throughout the OTR to attain and maintain the 8-hour ground-level ozone NAAQS.

The final-form rulemaking is required under the CAA and, consistent with section 4.2(a) of the act (35 P.S. §4004.2(a)), is reasonably required to achieve and maintain the health-based and welfare-based 8-hour ground-level ozone NAAQS and to satisfy related CAA requirements in this Commonwealth. Once published as a final-form rulemaking in the *Pennsylvania Bulletin*, this final-form rulemaking will be submitted to the EPA as a revision to the Commonwealth's SIP.

On February 11, 2016, the Air Quality Technical Advisory Committee (AQTAC) was briefed on the final-form rulemaking and the comments received on the proposed rulemaking, and they had no concerns. The AQTAC voted unanimously to concur with the Department's recommendation to move the final-form rulemaking forward to the Board for consideration. The final-form rulemaking was discussed with the Citizens Advisory Council (CAC) Policy and Regulatory Oversight Committee on March 2, 2016. On the recommendation of the Policy and Regulatory Oversight Committee, on March 15, 2016, the CAC concurred with the Department's recommendation to forward the final-form rulemaking to the Board. The Small Business Compliance Advisory Committee (SBCAC) was briefed on the final-form rulemaking on April

27, 2016. The SBCAC voted unanimously to concur with the Department's recommendation to move the final-form rulemaking forward to the Board for consideration.

E. Summary of Final-Form Rulemaking and Changes from Proposed to Final-Form Rulemaking

§ 129.51. General

The final-form rulemaking amends § 129.51(a) to extend its coverage to the owner and operator of a miscellaneous metal part surface coating process or miscellaneous plastic part surface coating process covered by this final-form rulemaking. Section 129.51(a) provides an alternative method for the owner and operator of an affected facility to achieve compliance with air emission limits. There are no changes to § 129.51 from proposed to final-form rulemaking.

§ 129.52. Surface coating processes

The final-form rulemaking amends § 129.52(g) (relating to surface coating processes) to clarify that the required 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). The records shall be submitted to the Department in an acceptable format on a schedule reasonably prescribed by the Department. There are no changes to § 129.52(g) from proposed. The Board received comments from IRRC recommending that clarity be provided in regards to what constitutes submitting records to the Department “in an acceptable format” and “on a schedule reasonably prescribed.” However, the Board did not make these changes because the conditions of applicable permits include recordkeeping and reporting requirements, including the format and schedule for submittal to the Department. Similarly, the Department specifies the format and schedule in its request for records from those owners and operators of subject sources that do not have permits, tailoring the request to the individual source. Keeping the regulatory language provides flexibility for these conditions to be made specific to different sources by inclusion in the applicable permit.

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-form 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.

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

The final-form rulemaking adds § 129.52d to regulate VOC emissions from miscellaneous metal parts surface coating processes, miscellaneous plastic parts surface coating processes and pleasure craft surface coatings. As explained in subsection (c), § 129.52d supersedes the requirements of a RACT permit already issued under §§ 129.91—129.95 (relating to stationary

sources of NO_x and VOCs) to the owner or operator to control, reduce or minimize VOC emissions from a process or coating subject to § 129.52d(a), except to the extent the RACT permit contains more stringent requirements.

The applicability of § 129.52d is described in subsection (a). Under subsection (a)(1), the final-form rulemaking applies to the owner and operator of a miscellaneous metal part surface coating process or miscellaneous plastic part surface coating process, or both, if the total actual VOC emissions from all miscellaneous metal part coating units and miscellaneous plastic part coating units, including related cleaning activities, at the facility are equal to or greater than 2.7 tons per 12-month rolling period, before consideration of controls. As with all RACT regulations, an affected owner or operator remains subject to the applicable requirements even if the throughput or VOC emissions fall below the applicability threshold of subsection (a)(1).

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

Subsection (a)(3) specifies that compliance with the VOC emission limits and other requirements of this section assures compliance with the VOC emission limits and other requirements of § 129.52 for the miscellaneous metal parts and products surface coating processes as specified in § 129.52, Table I, Category 10.

Subsection (a)(4) specifies that if an owner or operator elects to comply with § 129.52e (relating to control of VOC emissions from automobile and light-duty truck assembly coating operations and heavier vehicle coating operations) under subsection (a)(2) or (3), then § 129.52e instead of this section applies to the separate coating line at the facility, or to the coating of a body or body part for a new heavier vehicle at the facility, or both, for which the election is made. This effectuates the recommendations in the EPA's *Control Techniques Guidelines for Automobile and Light-Duty Truck Assembly Coatings*, EPA-453/R-08-006, Office of Air Quality Planning and Standards, EPA, September 2008, that a state consider giving an owner or operator of a separate coating line at an automobile and light-duty truck assembly coating facility the option of complying with the state's regulation adopted under the 2008 Automobile and Light-Duty Truck Assembly Coatings CTG (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. See 2008 ALDT CTG, p. 4 and 2008 MMPP CTG, p. 4.

Subsection (a)(5) specifies that the final-form rulemaking does not apply to an affected owner or operator in the use or application of coatings under certain circumstances. Proposed subsection (a)(5)(i) simply specified aerosol coatings. Subsection (a)(5)(i) is amended to clarify that this section does not apply to an owner or operator in the use or application of aerosol coatings that meet the requirements of 40 CFR Part 59 Subpart E. This amendment is added in response to

comments received during the public comment period to provide clarity on the applicability of the requirements of § 129.52d to the use of aerosol coatings including hand-held aerosol cans.

Subsection (b) establishes 72 definitions to support this section.

Subsection (c) establishes that the requirements of this section supersede the requirements of a RACT permit issued under §§ 129.91—129.95 to the owner or operator of a source subject to subsection (a) prior to January 1, 2017, except to the extent the RACT permit contains more stringent requirements. The proposed compliance date was January 1, 2016; however the rulemaking was not finalized by January 1, 2016. The Board has revised the compliance date in the final rulemaking to January 1, 2017. January 1, 2017, is the mandated deadline required under the EPA's final rule pertaining to the *Implementation of the 2008 National Ambient Air Quality Standards for Ozone: State Implementation Plan Requirements* (80 FR 12279, March 6, 2015). The EPA stated that the RACT measures for the 2008 ozone National Ambient Air Quality Standard (NAAQS) must be implemented "as expeditiously as practicable, but no later than January 1 of the 5th 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 (77 FR 30088, 30143, May 21, 2012). Consequently, RACT measures for the 2008 8-hour ozone standard must be implemented by January 1, 2017.

Subsection (d) establishes emission limitations beginning January 1, 2017, for a person subject to subsection (a)(1). Three options for meeting the emission limitations are included: in subsection (d)(1), use of compliant materials, as applied, excluding water and exempt compounds, that meet the VOC content limit for the applicable coating category specified in the applicable table of VOC content limits in Tables I—V; in subsection (d)(2), a combination of one or more VOC-containing coatings, as applied, that meet the emission rate limits for the applicable coating category specified in the applicable table of emission rate limits in Tables VI—IX, and one or more VOC emissions capture systems and one or more add-on air pollution control devices that meet the requirements of subsection (e)(2); or in subsection (d)(3), use of a VOC emissions capture system and add-on air pollution control device that is acceptable under § 129.51(a) (relating to general) and meets the requirements of subsection (e)(2). Under the third option, the overall control efficiency of a control system, as determined by the test methods and procedures specified in Chapter 139 (relating to sampling and testing), may be no less than 90%.

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

Subsection (d)(5) establishes that for a miscellaneous metal part or miscellaneous plastic part coating that does not meet the coating categories listed in Table I, II, VI or VII, the VOC content limit or VOC emission rate limit shall be determined by classifying the coating as a general one component coating or general multicomponent coating. The corresponding general one component coating or general multicomponent coating limit applies.

Subsection (d)(6) establishes that for a pleasure craft coating that does not meet the coating categories listed in Table IV or IX, the VOC content limit or VOC emission rate limit shall be

determined by classifying the coating as an "all other pleasure craft surface coatings for metal or plastic." The "all other pleasure craft surface coatings for metal or plastic" limit applies.

Subsection (e) establishes compliance and monitoring requirements.

Subsection (f) establishes recordkeeping and reporting requirements.

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

Subsection (h) specifies exempt coatings and exempt coating unit operations.

Subsection (i) specifies the work practice requirements for coating-related activities.

Subsection (j) specifies the work practice requirements for cleaning materials.

Subsection (k) establishes the requirements for measurements and calculations.

Section 129.52d contains nine tables. Tables I and II set forth surface coating VOC content limits for the overarching surface coating categories of metal parts and products and plastic parts and products, respectively. Tables III—V set forth surface coating VOC content limits for the miscellaneous metal and plastic parts surface coating categories of automotive/transportation and business machine plastic parts, pleasure craft (recreational boats), and motor vehicle materials. The limits set forth in Tables I—V are applicable for complying with emission limitations in subsection (d)(1), namely the use of compliant materials. Tables VI—IX set forth surface coating VOC emission rate limits for the same surface coating categories as Tables I—V, though there is not a table of VOC emission rate limits specific to motor vehicle materials coatings. The limits set forth in Tables VI—IX are applicable for complying with emission limitations in subsection (d)(2) or (3). Subsection (d)(2) provides for the use of a combination of complying coating materials, a VOC emissions capture system and an add-on air pollution control device. Subsection (d)(3) provides for the use of a VOC emissions capture system and an add-on air pollution control device.

Three VOC content limits in Table IV differ from the 2008 MMPP CTG and reflect the input the EPA received from the pleasure craft coatings industry regarding technological infeasibility following the EPA's publication of the final CTG. 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. The three VOC content limits are for Antifoulant Sealer/Tiecoat (not in CTG), Extreme High-gloss Topcoat (more stringent in CTG) and Other Substrate Antifoulant Coating (more stringent in CTG). The Board expects that these revised VOC content limits for the pleasure craft surface coatings will have a *de minimis* impact on the amount of VOC emission reductions achieved from the implementation of the final-form rulemaking.

No changes are made to subsections (b) and (e)—(k) or to Tables I—IX from proposed to final-form rulemaking.

§ 129.67. Graphic arts systems

Subsection (a)(1) is amended to extend its applicability to the owner and 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. There are no changes to § 129.67 from proposed to final-form rulemaking.

§ 129.75. Mobile equipment repair and refinishing

Subsection (b)(1) is amended to specify that § 129.75 does not apply to a person who applies surface coating to mobile equipment or mobile equipment components if the surface coating process is subject to the miscellaneous metal parts finishing requirements of § 129.52 or the requirements of § 129.52d. There are no changes to § 129.75 from proposed to final-form rulemaking.

F. Summary of Major Comments and Responses

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. In addition, the Independent Regulatory Review Commission (IRRC) provided comments on the proposed rulemaking. The comments received on the proposed rulemaking are summarized in this section and are more extensively addressed in a Comment and Response Document, which is available from the Department.

General Support of Proposed Rulemaking

The commentator supported the Department in proposing § 129.52d to require RACT requirements and RACT emissions limitations for stationary sources of VOC emissions from metal parts surface coating operations. The Board thanks the commentator for the support.

Consistency with the EPA 2008 Control Techniques Guidelines

The commentator noted that the proposed RACT requirements and RACT emissions limitations are consistent with the EPA's 2008 Control Techniques Guidelines for Miscellaneous Metal and Plastic Parts Coatings (EPA-453/R-08-003). The Board agrees.

Compliance Date

The commentator noted that the proposed rulemaking established a compliance date of January 1, 2016, and responded to the Board's request for comments regarding a compliance date of May 1, 2016, or later. The commentator recommended that the compliance date be revised to be no sooner than May 1, 2016, to allow time for manufacturers to switch to complying coatings, order and install new application technology, and train employees to properly apply the new coatings and use the new equipment. Time will also be needed for manufacturers to evaluate coating substitutions to ensure that the coating will meet customer and quality requirements. In response, the Board has revised the final-form rulemaking to require compliance by January 1, 2017. The January 1, 2017, compliance date will allow sufficient time for compliance, and is the mandated deadline for implementation of RACT measures 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).

IRRC recommended that the EQB establish a compliance date that allows for the proper development of a final-form regulation and full compliance by the regulated community. The Board agrees and revised the final-form rulemaking to require compliance by January 1, 2017.

Option to Comply with Proposed Automobile and Light-Duty Truck Assembly Coating Operations and Heavier Vehicle Coating Operations Requirements

IRRC noted that certain owners and operators 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 proposed rulemaking for the control of VOC emissions from automobile and light-duty truck assembly coating operations and heavier vehicle coating operations, which was being reviewed concurrently as a proposed rulemaking (see EQB #7-490 or IRRC #3110). IRRC requested that the Board ensure that this proposed rulemaking and the proposed rulemaking for automobile and light-duty truck assembly coating operations and heavier vehicle coating operations are adopted on the same date. The Board agrees and notes that it intends to consider the two final-form rulemakings concurrently.

Exemption for Aerosol Coatings and Hand-held Aerosol Cans

The commentator noted that proposed § 129.52d(a)(5)(i) provides an exemption from the requirements of § 129.52d for aerosol coatings. The commentator supported the exemption for aerosol coatings, but sought clarification that aerosol coatings, specifically hand-held aerosol cans, are also exempt from § 129.52. The commentator recommended that the Board revise § 129.52 to include a specific exemption for aerosol coatings or include a provision similar to § 129.52(i) stating that the requirements and limits for miscellaneous metal parts coatings in

§ 129.52 are superseded by § 129.52d. Additionally, the commentator recommended that the Board include a provision in § 129.52d similar to § 129.52a(a)(2) (relating to control of VOC emissions from large appliance and metal furniture surface coating processes) that clearly states that § 129.52d supersedes the emissions limits and other requirements of § 129.52.

The Board thanks the commentator for the support of the exemption for aerosol coatings in proposed § 129.52d(a)(5)(i). This exemption is consistent with the recommendations of the EPA provided in the 2008 MMPP CTG, which stated on page 30 that the EPA recommends that aerosol coatings be excluded from the VOC limitations and application methods addressed by the CTG and noted that aerosol coatings are a separate category under Section 183(e) of the CAA. Accordingly, § 129.52d(a)(5)(i) is amended in the final-form rulemaking to clarify that aerosol coatings are exempt from § 129.52d when the aerosol coatings meet the requirements of 40 CFR Part 59, Subpart E (relating to National volatile organic compound emission standards for aerosol coatings).

Further, § 129.52 is amended in the final-form rulemaking by adding subsection (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 including hand-held aerosol cans. Subsection (k) states: “The provision of § 129.52d(a)(5)(i) (relating to control of VOC emissions from miscellaneous metal parts surface coating processes, miscellaneous plastic parts surface coating processes and pleasure craft surface coatings) 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).”

The Board considered the commentator’s suggestion to add superseding language to § 129.52d. The Board did not add a provision to supersede the emission limits and other requirements of § 129.52 for miscellaneous metal parts and products with the requirements of § 129.52d due to the differences between the two regulations with respect to the applicability threshold. In making this decision, the Board was mindful of Section 110(l) of the CAA, which specifies, in part, that the Administrator of the EPA shall not approve a revision of a plan [State Implementation Plan] if the revision would interfere with any applicable requirement concerning attainment and reasonable further progress. This provision of the CAA is an ‘anti-backsliding’ provision. The Department intends to submit the final-form rulemaking to the EPA as a revision to the SIP upon final-form publication in the *Pennsylvania Bulletin*.

IRRC commented that § 129.52d(a)(5)(i) provides an exemption for the use or application of aerosol coatings and that a commentator asked for clarification on whether hand-held aerosol cans would be included in this exemption. IRRC requested that the Board explain in the Preamble to the final-form rulemaking whether hand-held aerosol cans are exempt, and if they are, to clarify that in the regulation. The Board agrees that the exemption for aerosol coatings set forth in § 129.52d(a)(5)(i) includes hand-held aerosol cans. The definition for aerosol coatings set forth in § 121.1 (relating to definitions) states that an aerosol coating is, “A coating expelled from a hand-held pressurized, nonrefillable container in a finely divided spray when a valve on the container is depressed.” Therefore, the exemption for aerosol coatings set forth in § 129.52d(a)(5)(i) includes hand-held aerosol cans.

IRRC commented that the commentator suggested that this rulemaking be amended to state that § 129.52d supersedes the emissions limits and other requirements of § 129.52. IRRC noted that other sections of Chapter 129 include language that supersedes § 129.52. If language superseding § 129.52 is appropriate for this rulemaking, while at the same time consistent with Federal requirements on which this rulemaking is based, IRRC suggested that it be included in the final-form rulemaking. After careful review, the Board did not add a provision to supersede the emission limits and other requirements of § 129.52 for miscellaneous metal parts and products with the requirements of § 129.52d due to the differences in the applicability thresholds for the two regulations. As mentioned above, the anti-backsliding provision of section 110(l) of the CAA specifies, in part, that the Administrator of the EPA shall not approve a revision of a plan [State Implementation Plan] if the revision would interfere with any applicable requirement concerning attainment and reasonable further progress.

§ 129.52. Surface coating processes. — Reasonableness; Clarity.

IRRC noted that § 129.52(g) is being amended to require *onsite* [emphasis added] storage of records. IRRC asked what the reason is for this change and for the Board to explain the rationale for this requirement in the Preamble to the final-form rulemaking. The Board added ‘onsite’ to § 129.52(g) to clarify that records should be maintained at the site for 2 years, unless a longer period is required by an order, plan approval, or operating permit, and should be available to a Department inspector during a site visit. In addition, adding ‘onsite’ to § 129.52(g) establishes consistency with § 129.51(d), as revised in the final-form rulemaking for flexible packaging printing presses, offset lithographic printing presses, letterpress printing presses, and adhesives, sealants, primers and solvents, published at 44 *Pa. B.* 3929 (June 28, 2014).

IRRC expressed a concern regarding the clarity of the last sentence of § 129.52(g). This sentence in the proposed rulemaking read as follows: “The records shall be submitted to the Department in an acceptable format on a schedule reasonably prescribed by the Department.” IRRC stated that the term “in an acceptable format” is vague, and suggested that it be clarified to state what formats would be acceptable. The Board carefully considered the suggestion but did not revise the requirement. The conditions of applicable permits include recordkeeping and reporting requirements, including the format. The regulatory language “in an acceptable format” provides flexibility for these conditions to be made specific to individual sources by inclusion in the applicable permit. Similarly, the Department specifies the format in its request for records from those owners and operators of subject sources that do not have permits, tailoring the request to the individual source. Providing more prescriptive language in the regulation would limit the opportunities for the owner and operator of the source to have flexibility in recordkeeping and reporting.

IRRC expressed a second concern regarding the clarity of the last sentence of § 129.52(g). IRRC stated that the term “on a schedule reasonably prescribed” is vague. IRRC noted that this term is in the existing regulation. IRRC expressed the belief that the overall clarity of this section would be improved if a more definitive and binding timeframe or schedule were included in the final-form regulation. The Board carefully considered the comment but did not revise the requirement. The conditions of applicable permits include recordkeeping and reporting requirements, as well as the schedule for the submittal of the records to the Department. The regulatory language “on a schedule reasonably prescribed” provides flexibility for these

conditions to be made specific to individual sources by inclusion in the applicable permit. Similarly, the Department specifies the schedule in its request for records from those owners and operators of subject sources that do not have permits, tailoring the schedule to each individual source. Providing more prescriptive language in the regulation would limit the opportunities for the owner and operator of the source to have flexibility in recordkeeping and reporting.

Comments received on the proposed rulemaking and related issues have been addressed in this final-form rulemaking.

G. Benefits, Costs and Compliance

Benefits

The Statewide implementation of the VOC emission control measures in the final-form rulemaking will benefit the 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, which are precursors to the formation of ground-level ozone air pollution. Exposure to high concentrations of ground-level ozone is a serious human and animal health threat, causing respiratory illnesses and decreased lung function as well as other adverse health effects, leading to a lower quality of life. Reduced ambient concentrations of ground-level ozone would reduce the incidences of hospital admissions for respiratory ailments including asthma and improve the quality of life for citizens overall. While children, the elderly and those with respiratory problems are most at risk, even healthy individuals may experience increased respiratory ailments and other symptoms when they are exposed to high levels of ambient ground-level ozone while engaged in activities that involve physical exertion. High levels of ground-level ozone affect animals, including pets, livestock and wildlife, in ways similar to humans.

In addition to causing adverse human and animal health effects, the EPA has concluded that high levels of ground-level ozone affect vegetation and ecosystems leading to: reductions in agricultural crop and commercial forest yields by destroying chlorophyll; reduced growth and survivability of tree seedlings; and increased plant susceptibility to disease, pests and other environmental stresses, including harsh weather. In long-lived species, these effects may become evident only after several years or even decades and have the potential for long-term adverse impacts on forest ecosystems. Ozone damage to the foliage of trees and other plants can decrease the aesthetic value of ornamental species used in residential landscaping, as well as the natural beauty of parks and recreation areas.

The economic value of some welfare losses due to high concentrations of ground-level ozone can be calculated, such as crop yield loss from soybeans due to both decreased seed production and reduced size and quality of seeds and from visible injury to some leaf crops, including lettuce, spinach and tobacco, as well as visible injury to ornamental plants, including grass, flowers and shrubs. Other types of welfare loss may not be quantifiable, such as the reduced aesthetic value of trees growing in heavily visited parks. The Commonwealth's 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. 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 the Commonwealth's economy (source: Department of Agriculture).

The Department of Conservation and Natural Resources (DCNR) is the steward of the State-owned forests and parks. DCNR awards millions of dollars in construction contracts each year to build and maintain the facilities in its parks and forests. Timber sales on State forest lands contribute to the \$5 billion-a-year timber industry. Hundreds of concessions throughout the park system help complete the park experience for both State and out-of-State visitors (source: DCNR). Further, the Commonwealth leads the Nation in growing volume of hardwood species, with 17 million acres in forest land. As the leading producer of hardwood lumber in the United States, the Commonwealth also leads in the export of hardwood lumber, exporting nearly \$800 million annually in lumber, logs, furniture products and paper products to more than 70 countries around the world. Recent United States Forest Service data show that the forest growth-to-harvest rate in this Commonwealth is better than 2 to 1. This vast renewable resource puts the hardwoods industry at the forefront of manufacturing in this Commonwealth. Through 2006, the total annual direct economic impact generated by the Commonwealth's wood industry was \$18.4 billion. The industry employed 128,000 people, with \$4.7 billion in wages and salaries earned. Production was 1.1 billion board feet of lumber annually (source: Strauss, Lord, Powell; Pennsylvania State University, June 2007, cited in Pennsylvania Hardwoods Development Council Biennial Report, 2009-2010).

Through deposition, ground-level ozone also contributes to pollution in the Chesapeake Bay. These effects can have adverse impacts including loss of species diversity and changes to habitat quality and water and nutrient cycles. High levels of ground-level ozone can also cause damage to buildings and synthetic fibers, including nylon, and reduced visibility on roadways and in natural areas. The reduction of ground-level ozone air pollution concentrations directly benefits the human and animal populations in this Commonwealth with improved ambient air quality and healthier environments. The agriculture and timber industries and related businesses benefit directly from reduced economic losses that result from damage to crops and timber. Likewise, the natural areas and infrastructure within this Commonwealth and downwind benefit directly from reduced environmental damage and economic losses.

This final-form rulemaking is designed to adopt VOC emission standards and emission limitations consistent with the standards and recommendations in the EPA's 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-form rulemaking applies these standards and limitations across this Commonwealth, as required under section 184(b)(1)(B) of the CAA. Consistent with section 4.2 of the act, the measures in this final-form rulemaking are reasonably required to achieve and maintain the health-based and welfare-based 8-hour ozone NAAQS in this Commonwealth.

The Statewide implementation of the VOC emission control measures in the final-form rulemaking may generate reductions of as much as 1,586 tons of VOC emissions per 12-month rolling period from the 139 potentially affected facilities identified by the Department in its databases, depending on the level of compliance already demonstrated by the owners and operators of these potentially affected facilities. These projected estimated reductions in VOC emissions and the subsequent reduced formation of ground-level ozone will help ensure that the owners and operators of businesses, citizens and the environment of this Commonwealth

experience the benefits of improved health and welfare from lowered concentrations of ground-level ozone.

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 and pleasure craft surface coatings. Although the final-form rulemaking is designed primarily to address ozone air quality, the reformulation of high-VOC content coating materials to low-VOC content coating materials or the substitution of low-VOC content coating materials for high-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 and streams and rivers.

The Statewide implementation of the final-form rulemaking control measures will assist the Commonwealth in reducing VOC emissions locally and the resultant local formation of ground-level ozone in this Commonwealth from surface coating processes subject to the final-form rulemaking, as well as assist in reducing the transport of VOC emissions and ground-level ozone to downwind states. Statewide implementation will also facilitate implementation and enforcement of the final-form rulemaking in this Commonwealth. The measures in the final-form rulemaking are reasonably necessary to attain and maintain the health-based and welfare-based 8-hour ground-level ozone NAAQS and to satisfy related CAA requirements in this Commonwealth.

The final-form rulemaking may create economic opportunities for coating formulators and VOC emission control technology innovators, manufacturers and distributors through an increased demand for new or reformulated coating materials or for new or improved application or control equipment. In addition, the owners and operators of regulated facilities may choose to install and operate an emissions monitoring system or equipment necessary for an emissions monitoring method to comply with the final-form rulemaking, thereby creating an economic opportunity for the emissions monitoring industry.

Compliance costs

The Department reviewed its air quality databases and identified 160 manufacturing facilities in this Commonwealth whose owners and operators may be subject to the final-form rulemaking. According to the Department databases, the actual VOC emissions from these 160 facilities assumed to be subject to the final-form rulemaking totaled 4,552 tons in 2012. Of the 160 facilities reporting VOC emissions in 2012, the owners and operators of 139 of these facilities reported VOC emissions totaling 2.7 tons or more; their combined reported emissions totaled 4,531 tons in 2012. Accordingly, the owners and operators of these 139 facilities 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 the final-form VOC emission reduction measures, work practice standards and recordkeeping requirements. The records will be submitted to the Department in an acceptable format upon receipt of a written request from the Department. The owners and

operators of the remaining 21 manufacturing facilities each reported VOC emissions below 2.7 tons; their combined reported emissions totaled 21 tons in 2012. The owners and operators of these 21 facilities are subject only to the recordkeeping requirements and, if requested by the Department, reporting requirements of the final-form rulemaking.

The Board anticipates that implementation of the final-form rulemaking provisions will have minimal financial impact on the owners and operators of affected facilities. The Board expects that the owners and operators of facilities subject to the applicability threshold of 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 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-form rulemaking and, if so, may have no additional annual costs.

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 costs in the 2004 NESHAPs for reformulation of high-HAP content coating materials to low-HAP content coating materials as the basis for estimating the costs that will be incurred to implement the CTG recommendations, because these costs are thought to be similar to the costs of reformulating high-VOC content coating materials to low-VOC content coating materials. The EPA estimated the cost averaged across all sizes of facilities subject to the 2004 NESHAPs to be \$10,500 per facility, based on the reformulation of high-HAP content coating materials to low-HAP content coating materials and use of low-HAP content coating materials. The EPA applied the NESHAP-derived cost of \$10,500 per facility to the number of facilities it identified Nationwide as subject to the CTG to calculate a cost effectiveness for implementation of the VOC emission control measures. The EPA estimated a cost effectiveness of \$1,758 per ton of VOC emissions reduced.

The EPA stated in the 2008 MMPP CTG that it estimates that implementing the recommended control measures will reduce the emissions of VOC from those facilities that emit above the threshold of 15 pounds per day [or equivalent 2.7 tons per 12-month rolling period] by 35%. See 2008 MMPP CTG, page 32. Therefore, the Board estimates that 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. Using the EPA's cost effectiveness of \$1,758/ton of VOC emissions reduced, the Board estimates that the total maximum annual costs to the affected regulated industry in this

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

The Board also calculated the cost effectiveness for the owners and operators of the 139 potentially affected facilities in this Commonwealth using the EPA's cost of \$10,500 per facility. The estimated total maximum anticipated annual costs to the affected regulated industry could be up to \$1.46 million ($\$10,500 \times 139 \text{ facilities}$). Therefore, the cost effectiveness for the reductions of 1,586 tons of VOC emissions would be approximately \$920 per ton of VOC emissions reduced ($\$1.46 \text{ million}/1,586 \text{ tons of VOC emissions reduced}$) on an annual basis, which is lower than the EPA estimate of \$1,758 per ton of VOC emissions reduced on an annual basis. Again, this difference may be due in part to the Commonwealth-specific emission data used in the calculation. The Board therefore estimates that the range of cost effectiveness to the regulated industry for implementing the final-form rulemaking is \$920 per ton of VOC emissions reduced to \$1,758 per 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 Board 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 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-form rulemaking VOC emission control measures.

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

Emission limitations established by this final-form rulemaking will 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-form 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 final-form rulemaking, the requirements will apply to affected owners and operators irrespective of a modification to the Operating Permit.

New legal, accounting or consulting procedures are not required.

Compliance assistance plan

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

Paperwork requirements

The recordkeeping and reporting requirements for owners and operators of affected facilities at, above or below the threshold for control measures are minimal because the records required by the final-form rulemaking are in line with what the industry currently tracks for inventory purposes or is required in current permits. The owner or operator of a facility subject to the final-form rulemaking is required to maintain records sufficient to demonstrate compliance with the applicable requirements. Records maintained for compliance demonstrations may include purchase, use, production and other records. The records must 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) and submitted to the Department in an acceptable format upon receipt of a written request from the Department.

H. Pollution Prevention

The Pollution Prevention Act of 1990 (42 U.S.C.A. §§ 13101—13109) established a National policy that promotes pollution prevention as the preferred means for achieving state

environmental protection goals. The Department encourages pollution prevention, which is the reduction or elimination of pollution at its source, through the substitution of environmentally friendly materials, more efficient use of raw materials and the incorporation of energy efficiency strategies. Pollution prevention practices can provide greater environmental protection with greater efficiency because they can result in significant cost savings to facility owners and operators that permanently achieve or move beyond compliance.

Statewide implementation of the VOC emission control measures in the final-form rulemaking may generate reductions of as much as 1,586 tons of VOC emissions per 12-month rolling period from the 139 potentially subject facilities identified by the Department in its databases, depending on the level of compliance already demonstrated by the owners and operators of these facilities. These projected estimated reductions in VOC emissions and the subsequent reduced formation of ground-level ozone will help ensure that the owners and operators of businesses, 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 the use of low-VOC content and low-HAP content miscellaneous metal parts and miscellaneous plastic parts coatings and cleaning materials and pleasure craft surface coatings. Although the final-form rulemaking is designed primarily to address ozone air quality, the reformulation of high-VOC content coating materials to low-VOC content coating materials or the substitution of low-VOC content coating materials for high-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-form rulemaking provides as one compliance option the use of individual compliant coating materials in subsection (d)(1) and the use of specified high-transfer-efficient coating application methods in subsection (g). Coatings that are compliant with the HAP content limits and emission rate limits of the 2004 NESHAPs and with the final-form rulemaking VOC content limits and emission rate limits are readily available to the owners and operators of all sizes of subject facilities. The final-form rulemaking provides flexibility in compliance through the second option in subsection (d)(2) of using a combination of VOC content limit compliant coating materials and the specified high-transfer-efficient coating application methods in subsection (g) with a VOC emissions capture system and add-on air pollution control device. 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 coating application methods, is provided in subsection (d)(3). However, because of the wide availability and lower cost (compared to installation and operation of VOC emissions capture systems and add-on air pollution control devices) of compliant VOC content coating materials and high-transfer-efficient coating application methods, compliant coating materials and specified high-transfer-efficient coating application methods are generally expected to be used by affected owners and operators to reduce VOC emissions from surface coating processes subject to this final-form rulemaking.

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.

I. Sunset Review

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

J. Regulatory Review

Under section 5(a) of the Regulatory Review Act (71 P. S. § 745.5(a)), on July 13, 2015, the Department submitted a copy of the notice of proposed rulemaking, published at 45 Pa. B. 4366 (August 8, 2015), to IRRC and to the Chairpersons of the House and Senate Environmental Resources and Energy Committees for review and comment.

Under section 5(c) of the Regulatory Review Act, IRRC and the House and Senate Committees were provided with copies of the comments received during the public comment period, as well as other documents when requested. In preparing the final-form rulemaking, the Department has considered all comments from IRRC, the House and Senate Committees and the public.

Under section 5.1(j.2) of the Regulatory Review Act (71 P. S. § 745.5a(j.2)), on _____, 2016, the final-form rulemaking was deemed approved by the House and Senate Committees. Under section 5.1(e) of the Regulatory Review Act, IRRC met on _____, 2016, and approved the final-form rulemaking.

K. Findings

The Board finds that:

(1) Public notice of proposed rulemaking was given under sections 201 and 202 of the act of July 31, 1968 (P.L. 769, No. 240) (45 P. S. §§ 1201 and 1202) and regulations promulgated thereunder, 1 Pa. Code §§ 7.1 and 7.2.

(2) At least a 60-day public comment period was provided as required by law and all comments were considered.

(3) This final-form rulemaking does not enlarge the purpose of the proposed rulemaking published at 45 Pa. B. 4366 (August 8, 2015).

(4) These regulations are necessary and appropriate for administration and enforcement of the authorizing acts identified in Section C of this preamble.

(5) These regulations are reasonably necessary to attain and maintain the ozone NAAQS and to satisfy related CAA requirements.

L. *Order*

The Board, acting under the authorizing statutes, orders that:

- (a) The regulations of the Department, 25 Pa. Code Chapter 129, are amended by amending §§ 129.51, 129.52, 129.67, and 129.75, and by adding § 129.52d to read as set forth in Annex A.
- (b) The Chairperson of the Board shall submit this order and Annex A to the Office of General Counsel and the Office of Attorney General for review and approval as to legality and form, as required by law.
- (c) The Chairperson of the Board shall submit this order and Annex A to IRRC and the Committees as required by the Regulatory Review Act.
- (d) The Chairperson of the Board shall certify this order and Annex A and deposit them with the Legislative Reference Bureau as required by law.
- (e) This final-form rulemaking will be submitted to the EPA as an amendment to the Pennsylvania SIP.
- (f) This order shall take effect immediately upon publication in the *Pennsylvania Bulletin*.

PATRICK MCDONNELL,
Acting Chairperson