FINAL RULEMAKING
ENVIRONMENTAL QUALITY BOARD
[25 PA. CODE CH. 129]
Control of Volatile Organic Compound Emissions from Automobile and Light-Duty Truck Assembly Coating Operations and Heavier Vehicle Coating Operations

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 § 129.52e (relating to control of VOC emissions from automobile and light-duty truck assembly coating operations and heavier vehicle coating operations) to adopt reasonably available control technology (RACT) requirements and RACT emission limitations for stationary sources of volatile organic compound (VOC) emissions from automobile and light-duty truck assembly coating operations and heavier vehicle coating operations including primer, primer-surfacer, topcoat and final repair coating materials, as well as VOC emissions from additional coatings applied during the vehicle assembly process and related cleaning activities. The final-form rulemaking also adds terms and definitions to § 129.52e to support the interpretation of the final-form measures and amends § 129.51 (relating to general) to support the addition of § 129.52e.

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 automobile and light-duty truck assembly coating operations and, when elected, certain other vehicle-related surface coating operations. These processes include the application of an automobile assembly coating or a light-duty truck assembly coating, or both, to a new automobile body or a new light-duty truck body, to a body part for a new automobile or for a new light-duty truck, or to another part that is coated along with the new automobile body or body part or new light-duty truck body or body part, as well as the application of coatings to a body or body part for a new heavier vehicle. A heavier vehicle is 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.

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 Automobile and Light-Duty Truck Assembly Coatings Control Techniques Guidelines (2008 ALDT 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); and *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.

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 in breathing, chest pains, coughing, nausea, throat irritation and congestion. It can worsen bronchitis, heart disease, emphysema and asthma, and reduce lung capacity. Asthma is a significant and growing threat to children and adults. High levels of ground-level ozone 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

automobile and light-duty truck assembly coating operations and heavier vehicle coating operations, will allow the Commonwealth to make progress in achieving and maintaining the 1997, 2008 and 2015 8-hour ozone NAAQS.

There are Federal regulatory limits for VOC emissions from automobile and light-duty truck assembly coatings for several of the coating categories. In 1977, the EPA issued a CTG document entitled *Control of Volatile Organic Emissions from Existing Stationary Sources Volume II: Surface Coating of Cans, Coils, Paper, Fabrics, Automobiles, and Light-Duty Trucks* (EPA-450/2-77-008) (1977 CTG). The 1977 CTG provided RACT recommendations for controlling VOC emissions from automobile and light-duty truck assembly surface coating operations. The recommendations were for VOC emission limits calculated on a daily basis for each electrodeposition primer operation, primer-surfacer operation, topcoat operation and final repair operation. The limits of § 129.52 (relating to surface coating processes), Table I, category 6, regarding automobile and light duty truck coating subcategories of prime coat, top coat and repair, were promulgated at 9 Pa.B. 1447 (April 28, 1979) to implement RACT measures consistent with the recommendations in the 1977 CTG for the automobile and light duty truck coating categories.

The EPA promulgated New Source Performance Standards (NSPS) in 1980 (1980 NSPS) for surface coating of automobile and light-duty trucks in 40 CFR Part 60, Subpart MM (relating to standards of performance for automobile and light duty truck surface coating operations). The 1980 NSPS established VOC emission limits calculated on a monthly basis for each electrodeposition primecoat operation, guidecoat (primer-surfacer) operation, and topcoat operation located in an automobile or light-duty truck assembly plant constructed, reconstructed or modified after October 5, 1979. See 45 FR 85415 (December 24, 1980) and 59 FR 51383 (October 11, 1994). The NSPS limits and the 1977 CTG recommendations for primer-surfacer and topcoat cannot be directly compared because of differences in the compliance period (monthly for the NSPS limits and daily for the 1977 CTG recommendations) and how transfer efficiency is considered (table values for the NSPS limits and actual transfer efficiency testing for the 1977 CTG recommendations).

In addition to establishing the 1980 NSPS VOC content limits, in 2004 the EPA promulgated 40 CFR Part 63, Subpart IIII (relating to National emission standards for hazardous air pollutants: surface coating of automobiles and light-duty trucks) (2004 NESHAP). See 69 FR 22602, 22623 (April 26, 2004). The 2004 NESHAP established organic hazardous air pollutant (HAP) emissions limitations calculated on a monthly basis for existing sources. More stringent limits apply to new sources that began construction after December 24, 2002. The 2004 NESHAP also specified work practices to minimize organic HAP emissions from the storage, mixing and conveying of coatings, thinners and cleaning materials, and from handling waste materials generated by the coating operation. Many HAPs are VOCs, but not all VOCs are HAPs. The requirements of the 2004 NESHAP apply to "major sources" of HAP from surface coatings applied to bodies or body parts for new automobiles or new light-duty trucks. 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)) and 69 FR 22602, 22603.

When developing the VOC emission reduction RACT measures included in its 2008 ALDT CTG, the EPA took into account the VOC emission limitations of the 1980 NSPS as well as the VOC control recommendations of the 1977 CTG and the HAP emission reduction measures in the 2004 NESHAP for the automobile and light-duty truck assembly coating industries. Additionally, in 2008, the Alliance of Automobile Manufacturers, an industry trade association representing the majority of these facilities, provided the EPA with information from its member companies. Nonmember companies also submitted information to the EPA. The EPA reviewed and evaluated this information in conjunction with developing the 2008 ALDT CTG. The information included VOC emission rates for electrodeposition primer operations, primer-surfacer operations and topcoat operations on a daily and monthly average for calendar years 2006 and 2007. The VOC emission limits recommended in the 2008 Automobile and Light-Duty Truck Assembly Coatings CTG are based on 2006 and 2007 data from then-operating automobile and light-duty truck assembly coating operations. The resulting recommended VOC emission limits in the 2008 ALDT CTG for electrodeposition primer operations, primer-surfacer operations and topcoat operations are more stringent than the 1977 CTG and the 1980 NSPS limits. The recommended VOC emission limit for final repair operation in the 2008 ALDT CTG is the same as the 1977 CTG recommended limit for this category. The work practices recommendations in the 2008 ALDT CTG mirror those in the 2004 NESHAP.

This final-form rulemaking is designed to adopt VOC emission limitations and requirements consistent with the standards and recommendations in the 2008 ALDT 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 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 ALDT CTG upon which the final rulemaking is based. 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 and to satisfy related CAA requirements.

State regulations to control VOC emissions from automobile and light-duty truck assembly coating operations, 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 automobile and light-duty truck assembly coatings on its section 183(e) list and, in 2008, issued a CTG for this product category. See 60 FR 15264, 15267 (March 23, 1995); 73 FR 58481; and *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. The 2008 ALDT 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 ALDT CTG would be substantially as effective as National regulations in reducing VOC emissions from the automobile and light-duty truck assembly coatings product category in ozone nonattainment areas. See 73 FR 58481. The 2008 ALDT CTG provides states with the EPA's recommendations of what constitutes RACT for the covered category. States may use the Federal recommendations provided in the 2008 ALDT CTG to inform their own determination as to what constitutes RACT for VOC emissions from the covered category. State air pollution control agencies may implement other technically-sound approaches that are consistent with the CAA requirements and the EPA's implementing regulations or guidelines.

The Department reviewed the RACT recommendations included in the 2008 ALDT 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 ALDT CTG are appropriate to be implemented in this Commonwealth as RACT for this category.

This final-form rulemaking applies to the owner and operator of an automobile and light-duty truck assembly coating operation that applies an automobile assembly coating or a light-duty truck assembly coating, or both, to a new automobile body or a new light-duty truck body, to a body part for a new automobile or for a new light-duty truck, or to another part that is coated along with the new automobile body or body part or new light-duty truck body or body part. 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 this final-form rulemaking instead of final-form § 129.52d. These options are provided to allow these owners and operators

flexibility in complying with their permit conditions and to optimize their operations. Final-form § 129.52d is being processed as a final-form rulemaking concurrently with this final-form rulemaking, with the intention of concurrent adoption and publication. See ____(Editor's note: The blank refers to the *Pennsylvania Bulletin* citation for final-form § 129.52d).

This final-form rulemaking also applies to the owner and operator of a facility that performs a coating operation subject to this final-form rulemaking on a contractual basis.

This final-form rulemaking does not apply to the use or application of an automobile and light-duty truck assembly coating by an owner or operator at a plastic or composites molding facility. The VOC content limits in the final-form rulemaking do not apply to an assembly coating supplied in a container with a net volume of 16 ounces or less or a net weight of 1 pound or less.

The Board is aware of 61 businesses in this Commonwealth, all of which are likely to be small businesses, whose owners and operators may be subject to the final-form rulemaking. The Board estimates that of this projected total of 61 potentially subject owners and operators, as many as 47 of the potentially subject facility owners and operators may have actual VOC emissions at or above the applicability threshold of 15 pounds (6.8 kilograms) per day of total actual VOC emissions, including VOC emissions from related cleaning activities, before consideration of controls. These owners and operators will be subject to the final-form VOC content limit requirements, work practice requirements, compliance monitoring and daily recordkeeping requirements and, if requested by the Department, reporting requirements. The owners and operators of the remaining potentially subject 14 facilities will only be subject to compliance monitoring and daily recordkeeping requirements and, if requested by the Department, reporting requirements.

Of the 61 owners and operators who may potentially be subject to this final-form rulemaking, the Department identified the owners and operators of 13 of these facilities from its databases. The owners and operators of 12 of these 13 facilities manufacture or surface coat, or both, bodies or body parts for new heavier vehicles such as fire trucks, ambulances and tow trucks and will only be subject to this final-form rulemaking if they elect to comply with this final-form rulemaking instead of complying with the final-form rulemaking for § 129.52d. The owner and operator of the remaining facility may potentially be subject based on previous surface coating operations. For purposes of discussing the potential impacts of this final-form rulemaking, however, the Board assumed that the owners and operators of all 13 facilities will elect to be subject to this final-form rulemaking. The Commonwealth's Small Business Development Center's Environmental Management Assistance Program (SBDC EMAP) reviewed the list of 13 potentially subject facilities reporting VOC emissions in 2013 identified by the Department from its databases and determined that all 13 of the facilities are considered a small business under the Federal Small Business Administration small business size regulations.

The owners and operators of the 13 facilities identified by the Department from its databases reported actual VOC emissions in 2013 totaling approximately 320 tons. The owners and operators of the ten facilities that may emit 15 pounds (6.8 kilograms) or more of total actual VOC emissions per day, including VOC emissions from related cleaning activities, before consideration of controls, reported actual VOC emissions equal to or greater than 2.7 tpy, totaling approximately 319 tons. Implementation of the recommended control measures by these

ten potentially subject facility owners and operators could generate reductions of as much as 111 tons of VOC emissions per year from the ten facilities, depending on the level of compliance already being achieved by these owners and operators. The estimated total maximum annual costs to these ten owners and operators could be up to $195,138. The range of cost per regulated facility owner and operator for implementing the final-form VOC emission control measures is estimated to be approximately $10,500 to $19,514 per facility. The range of cost effectiveness to the regulated facility owners and operators is approximately $946 per ton of VOC emissions reduced to $1,758 per ton of VOC emissions reduced on an annual basis.

Similarly, the Board estimates that implementation of the final-form VOC control measures and work practice requirements could generate potential VOC emission reductions of as much as 413 tpy from the 37 potentially subject small business-sized facilities identified by the SBDC EMAP that are likely to be subject at or above the applicability threshold of 15 pounds (6.8 kilograms) per day of total actual VOC emissions, including VOC emissions from related cleaning activities, before consideration of controls, depending on the level of compliance already being achieved by the owners and operators of these facilities. The estimated annual cost to the owners and operators of these 37 potentially subject non-permitted small business-sized facilities is $726,054. The estimated maximum annual cost per facility owner and operator is approximately $19,623.

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. Adoption of VOC emission requirements for sources subject to this final rulemaking 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 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 16-0-1 (yes; no; abstain) 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

Subsection (a) is amended to establish that compliance with § 129.52e may be achieved by alternative methods.

Subsection (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 § 129.52e shall be determined on the basis of equal volumes of solids.

Subsection (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 § 129.52e.

No changes are made to subsections (a), (a)(3) and (a)(6) from proposed.

§ 129.52e. Control of VOC emissions from automobile and light-duty truck assembly coating operations and heavier vehicle coating operations

The final-form rulemaking adds § 129.52e to regulate VOC emissions from automobile and light-duty truck assembly coating operations and heavier vehicle coating operations. As explained in subsection (c), § 129.52e 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 § 129.52e, except to the extent the RACT permit contains more stringent requirements.

Subsection (a)(1) establishes that the final-form rulemaking applies, as specified, to the owner and operator of an automobile and light-duty truck assembly coating operation that applies an automobile assembly coating or a light-duty truck assembly coating, or both, to a new automobile body or a new light-duty truck body, a body part for a new automobile or a new light-duty truck, or another part that is coated along with the new automobile body or body part or new light-duty truck body or body part.

Subsection (a)(2) establishes that the final-form rulemaking applies, as specified, to the owner and operator of an automobile and light-duty truck assembly coating operation that operates a separate coating line at the facility on which a coating is applied to another part intended for use in a new automobile or new light-duty truck or an aftermarket repair or replacement part for an automobile or light-duty truck if the owner or operator elects to comply with § 129.52e instead of § 129.52d. The separate coating of another part for use in a new automobile or new light-duty truck or an aftermarket repair or replacement part for an automobile or light-duty truck is included in the Miscellaneous Metal Products and Plastic Parts Coatings categories under section 183(e) and covered in the 2008 Miscellaneous Metal and Plastic Parts Coatings CTG (2008 MMPP CTG). The election occurs when the owner or operator notifies the Department by submitting a written statement to the appropriate Department regional office Air Quality Program Manager that specifies the intent to comply with § 129.52e instead of § 129.52d. Final-

form § 129.52d is being processed concurrently with this final-form rulemaking, with the intention of concurrent adoption and publication.

Subsection (a)(3) establishes that the final-form rulemaking applies, as specified, to the owner and operator of a heavier vehicle coating operation that coats a body or body part for a new heavier vehicle if the owner or operator elects to comply with § 129.52e instead of § 129.52d. Heavier vehicle coatings are included in the Miscellaneous Metal Products and Plastic Parts Coatings categories under section 183(e) of the CAA and are covered in the 2008 MMPP CTG. The election occurs when the owner or operator notifies the Department by submitting a written statement to the appropriate Department regional office Air Quality Program Manager that specifies the intent to comply with § 129.52e instead of § 129.52d.

Providing the election option under subsection (a)(2) and (3) effectuates the recommendations in the EPA 2008 ALDT CTG 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 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 either the state's regulation adopted under the 2008 MMPP CTG or the 2008 ALDT CTG. The separate coating of another part for use in a new automobile or new light-duty truck or an aftermarket repair or replacement part for an automobile or light-duty truck as well as heavier vehicle coatings are included in the Miscellaneous Metal Products and Plastic Parts Coatings categories under section 183(e) of the CAA and are therefore covered in the 2008 MMPP CTG. See 2008 ALDT CTG, page 4 and 2008 MMPP CTG, page 4.

Subsection (a)(4) establishes that the final-form rulemaking applies, as specified, to the owner and operator of a facility that performs a coating operation subject to § 129.52e on a contractual basis.

Subsection (a)(5) establishes that the final-form rulemaking does not apply to the use or application of an automobile and light-duty truck assembly coating by an owner or operator at a plastic or composite molding facility.

Subsection (b) establishes 25 definitions to support § 129.52e. A definition of "heavier vehicle" is included upon the request of the AQTAC at its April 3, 2014, meeting to improve the clarity of the final-form rulemaking and further delineate the types of vehicle coating operations subject to the final-form rulemaking.

Subsection (c) establishes that the requirements of this section supersede the requirements of a RACT permit issued under §§ 129.91—129.95 (relating to stationary sources of NO_x and VOCs) to the owner or operator of a source subject to this section 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)(1) establishes that beginning January 1, 2017, the VOC content limits specified in Tables I and II (relating to VOC content limits for primary assembly coatings; and VOC content limits for additional assembly coatings (grams of VOC per liter of coating excluding water and exempt compounds) as applied) apply to an owner and operator of a facility that has total actual VOC emissions equal to or greater than 15 pounds (6.8 kilograms) per day, before consideration of controls, from all operations at the facility that apply an assembly coating subject to this section, including VOC emissions from related cleaning activities. As with all RACT regulations, an owner or operator remains subject to the regulation even if the throughput or VOC emissions fall below the applicability threshold.

Subsection (d)(2) establishes that the VOC content limits specified in Tables I and II do not apply to an owner and operator of a facility that has total actual VOC emissions below 15 pounds (6.8 kilograms) per day, before consideration of controls, from all operations at the facility that apply an assembly coating subject to this section, including VOC emissions from related cleaning activities. This subsection also specifies that the VOC content limits in Tables I and II do not apply to an assembly coating supplied in a container with a net volume of 16 ounces or less or a net weight of 1 pound or less.

Subsection (e) establishes that beginning January 1, 2017, an owner and operator subject to the VOC content limits specified in Tables I and II must comply with specified work practices for coating-related activities and cleaning materials.

Subsection (f) establishes compliance monitoring and recordkeeping requirements.

Subsection (g) establishes measurement, calculation, sampling and testing methodologies. The Automobile Topcoat Protocol specified in subsection (g)(2)(i) for calculation of VOC emissions and rates applies not only to the owner and operator of an automobile and light-duty truck assembly coating operation, but also to the owner and operator of a facility that coats a body or body part for a new heavier vehicle that elects to comply with § 129.52e instead of § 129.52d.

Final-form § 129.52e contains two tables. Table I specifies VOC content limits for primary assembly coatings. The primary assembly coatings are applied to new automobile or new light-duty truck bodies, or to body parts for new automobiles or new light-duty trucks, as well as to other parts that are coated along with these bodies or body parts. These primary coatings are electrodeposition primer, primer-surfacer, topcoat and final repair. The Automobile Topcoat Protocol specified in subsection (g)(2)(i) and referenced in Table I applies not only to the owner and operator of an automobile and light-duty truck assembly coating operation, but also to the owner and operator of a facility that coats a body or body part for a new heavier vehicle that elects to comply with § 129.52e instead of § 129.52d. Table II specifies VOC content limits for additional assembly coatings. These additional coatings are applied during the vehicle assembly process and include glass bonding primer, adhesive, cavity wax, sealer, deadener, gasket/gasket

sealing material, underbody coating, trunk interior coating, bedliner, lubricating wax/compound and weatherstrip adhesive. The EPA VOC emission control recommendations included in the 2008 Automobile and Light-Duty Trucks Assembly Coatings CTG, and reflected in the final-form rulemaking, include the VOC content limits for the listed coatings.

The Board specifically requested comment on the proposed emission limit in Table II of 900 grams per liter of coating less water and exempt compounds for automobile and light-duty truck glass bonding primer. A limit of 700 grams per liter of coating less water and exempt compounds applies to a similar category, called automotive glass adhesive primer, in the existing adhesives regulations. See §§ 121.1, 129.77 and 130.702 (relating to definitions; control of emissions from the use or application of adhesives, sealants, primers and solvents; and emission standards). However, the EPA wrote in its notice of availability of the final 2008 Automobile and Light-Duty Trucks Assembly Coatings CTG that the cost of the testing required to confirm material performance and compliance with Federal crash safety standards and windshield integrity requirements would be unreasonable compared to the small emission reduction that would be achieved by the 700 grams per liter limit it had proposed for the 2008 ALDT CTG. See 73 FR 58481, 58486. The EPA explained that the small amount of additional emission reductions achieved by the 700 grams per liter limit are negligible compared to reductions potentially achieved by the 900 grams per liter limit and are more technically difficult to implement. See 73 FR 58481, 58486. The EPA thus concluded that the less stringent limit of 900 grams per liter for automobile and light-duty truck glass bonding primer is appropriate and satisfies RACT for automobile and light-duty truck assembly coating operations. See 73 FR 58481, 58486. The Board did not receive comments on this issue and the limit of 900 grams per liter limit of coating less water and exempt compounds is retained for the automobile and light-duty truck glass bonding primer category in final-form Table II.

No changes are made to subsections (a), (b), (f), (g) and Tables I and II from proposed. The only changes to § 129.52e from proposed are the change from a January 1, 2016, compliance date to a January 1, 2017, compliance date in subsections (c), (d) and (e).

F. *Summary of Major Comments and Responses*

The Board approved publication of the proposed rulemaking at its meeting of April 21, 2015. The proposed rulemaking was published at 45 Pa. B. 4351 (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. No public comments were received. 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 also addressed in a Comment and Response Document which is available from the Department.

Compliance Date

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 compliance date in the final-form rulemaking to January 1, 2017. The new compliance date of 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).

Option to Comply with Proposed Miscellaneous Metal Parts Surface Coating Processes, Miscellaneous Plastic Part Surface Coating Processes, and Pleasure Craft Surface Coatings Requirements

IRRC noted that 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 be regulated under this rulemaking or under the concurrently proposed rulemaking for the control of VOC emissions from miscellaneous metal parts surface coating processes, miscellaneous plastic parts surface coating processes and pleasure craft surface coatings (see EQB #7-491 or IRRC #3109). IRRC asked the Board to ensure that the two rulemakings are adopted on the same date. The Board agrees and notes that it intends to consider the two final-form rulemakings concurrently.

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 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 ALDT 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 111 tons of VOC emissions per year from the ten potentially affected facilities identified by the Department in its databases that are likely to be subject at or above the applicability threshold of 15 pounds (6.8 kilograms) per day of total actual VOC emissions, including VOC emissions from related cleaning activities, before consideration of controls. The owners and operators of these ten facilities will be required to implement the VOC control measures of the final-form rulemaking, depending on the level of compliance already being achieved 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 resulting 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 the use of low-VOC content and low-HAP content automobile and light-duty truck assembly coatings and implementation of work practices for coating-related and cleaning-related activities.

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 13 facilities in this Commonwealth whose owners and operators may be subject to the final-form rulemaking. The owners and operators of 12 of these 13 facilities manufacture or surface coat, or both, bodies or body parts for new heavier vehicles such as fire trucks, ambulances and tow trucks and will only be subject to this final-form rulemaking if they elect to comply with this final-form rulemaking instead of the final-form rulemaking for § 129.52d. The owner and operator of the remaining facility may potentially be subject based on previous surface coating operations. For purposes of discussing the potential impacts of this final-form rulemaking, the Board assumed that the owners and operators of all 13 facilities will elect to be subject to this final-form rulemaking. According to the Department databases, the actual VOC emissions from these 13 facilities assumed to be subject to the final-form rulemaking totaled 320 tons in 2013. Of the 13 facilities reporting VOC emissions in 2013, the owners and operators of ten of these facilities reported VOC emissions totaling 2.7 tons or more; their combined reported emissions totaled 319 tons in 2013. Accordingly, the owners and operators of these ten facilities are assumed to emit 15 pounds (6.8 kilograms) or more of total actual VOC emissions per day, including VOC emissions from related cleaning activities, before consideration of controls, and will be required to implement the final-form VOC emission reduction measures, which include coating VOC content limits, work practice standards for coatings, development and implementation of a written work practice plan for cleaning materials, and compliance monitoring and daily recordkeeping requirements. The owners and operators of the remaining three facilities each reported VOC emissions below 2.7 tons; their combined reported VOC emissions totaled approximately 1 ton in 2013. The owners and operators of these three facilities are assumed to emit less than 15 pounds (6.8 kilograms) per day of total actual VOC emissions, including VOC emissions from related cleaning activities, before consideration of controls, and will be subject only to the compliance monitoring and daily recordkeeping requirements.

For all subject owners and operators, the daily records are required to be maintained onsite for 2 years, unless a longer period is required under Chapter 127 (relating to construction, modification, reactivation and operation of sources) or a plan approval, operating permit or order issued by the Department. Records must be submitted to the Department in an acceptable format upon receipt of a written request from the Department.

The recommended RACT VOC emission reduction measures included in the 2008 ALDT CTG are largely based on the 2006 and 2007 data supplied by the Alliance of Automobile Manufacturers member companies and nonmember companies, the VOC emission limitations of the 1980 NSPS, the VOC control recommendations of the 1977 CTG and the 2004 NESHAP HAP emission reduction measures. While the owner or operator of an automobile and light-duty truck assembly coating or heavier vehicle surface coating facility area source of HAP may not meet the threshold for implementing the HAP emission reduction measures of the 2004 NESHAP (10 tpy of any single listed HAP or 25 tpy of any combination of HAPs), the owner or operator may meet the applicability threshold limit for implementing the final-form rulemaking RACT measures to control VOC emissions.

The costs estimated by the EPA to implement the recommended RACT measures are largely based on the 1980 NSPS VOC emission limitations and 2004 NESHAP HAP emission reduction

measures and costs. The owner and operator of an automobile and light-duty truck assembly coating facility that is already implementing the requirements of the 1980 NSPS or 2004 NESHAP and is potentially subject to the final-form rulemaking measures will likely not have additional costs to comply with the final-form rulemaking measures. The EPA therefore projected an estimated cost of $0 to the owners and operators of automobile and light-duty truck assembly coating facilities potentially subject to regulations implementing requirements consistent with the recommended RACT measures of the 2008 ALDT Coatings CTG.

However, the owners and operators of none of the 13 permitted facilities identified by the Department as potentially subject to the final-form rulemaking have permits implementing the 1980 NSPS or 2004 NESHAP requirements. The Department also determined that 12 of the 13 facility owners and operators are likely surface coating bodies and body parts for heavier vehicles. Consistent with a recommendation in the EPA 2008 ALDT CTG and the 2008 MMPP CTG, the final-form rulemaking provides the owner or operator of a facility that coats a body or body part for a new heavier vehicle the option to elect to be regulated under this final-form rulemaking instead of final-form § 129.52d. The EPA wrote in the 2008 ALDT CTG and the 2008 MMPP CTG that an owner or operator making this election will achieve at least equivalent, and perhaps greater, control of VOC emissions.

The cost to the potentially affected population will be about the same whether the owners and operators choose to comply with this final-form rulemaking or final-form § 129.52d. The Board developed its estimate of costs for the potentially subject owners and operators implementing the final-form rulemaking measures by using the cost estimates for implementing the recommended RACT measures of the 2008 MMPP CTG. The Board likewise used the EPA's estimate from the 2008 MMPP CTG for the amount of VOC emission reductions implementation of the recommended control measures may achieve.

The EPA estimated that the annual cost to owners and operators to comply with regulations based on the 2008 MMPP CTG to be $10,500 per facility and estimated the cost effectiveness for controlling the VOC emissions to be $1,758 per ton of VOC emissions reduced. The EPA also estimated that implementing the RACT measures of the 2008 MMPP CTG will achieve VOC emission reductions of 35%. Both the 2008 ALDT CTG and the 2008 MMPP CTG also recommend work practices for reducing VOC emissions from coatings and cleaning materials. The EPA believes that the work practice recommendations in both the 2008 ALDT CTG and the 2008 MMPP CTG will result in a net cost savings for affected owners and operators for coating and cleaning materials. Implementing the required work practices for coating-related activities and cleaning materials will reduce the amounts of VOC emissions overall from coating operations by reducing the amounts of VOC-containing coating and cleaning materials that are lost to evaporation, spillage and waste, and reducing or eliminating associated VOC emissions, thereby reducing the costs of purchasing coating and cleaning materials for use in the operation as well as decreasing the amount of annual emissions fees that must be paid for VOC emissions.

The Board estimates that the maximum potential amount of actual annual VOC emission reductions that may be achieved by implementing the final-form rulemaking is approximately 111 tons, based on the 2013 reported VOC emissions of 319 tons by the ten potentially subject permitted facility owners and operators identified from the Department's databases that may be required to implement the VOC control measures of the final-form rulemaking (35% reduction x

319 tons VOC emissions = 111 tons of VOC emissions reduced), depending on the level of compliance already being achieved by these owners and operators. The estimated annual cost to the owners and operators of these ten potentially subject permitted facilities could be a total of $195,138 (111 tons reduced x $1,758 per ton of VOC emissions reduced = $195,138). The cost per facility owner and operator could be approximately $19,514 ($195,138 / 10 facilities = $19,514), which is higher than the EPA's estimated cost per facility of $10,500 for implementing the recommended RACT measures of the 2008 MMPP CTG. 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 ten potentially subject 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 ten facility owners and operators could be up to $105,000 ($10,500 x 10 facilities = $105,000). The cost effectiveness for the reductions of 111 tons of VOC emissions could be as little as $946 per ton of VOC emissions reduced ($105,000 / 111 tons of VOC emissions reduced = $946 per ton of VOC emissions reduced) on an annual basis. This is less than the cost effectiveness of $1,758 per ton of VOC emissions reduced estimated by the EPA for implementing the recommended RACT measures of the 2008 Miscellaneous Metal and Plastic Parts Coatings CTG. Again, this difference may be due in part to the Commonwealth-specific emission data used in the calculation.

The Board estimates that the range of cost effectiveness to these ten facility owners and operators for implementing the final-form rulemaking is $946/ton of VOC emissions reduced to $1,758/ton of VOC emissions reduced on an annual basis. The range of cost to this group for implementing the final-form VOC emission control measures is estimated to be $10,500 to $19,514 per year per facility. The estimated total annual cost of implementing the final-form rulemaking for this group of potentially subject owners and operators ranges from $105,000 to $195,138. 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 likely to be 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 NSPS-compliant low-VOC content coating materials and 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 should not be a factor in the cost of complying with the final-form rulemaking VOC emission control measures.

Further, the Board expects that the annual financial impact to these owners and operators will be less than the estimated maximum costs due to flexibility in choosing compliance options. The final-form rulemaking provides for compliance through the use of complying coating materials and through work practice standards for coating-related activities and cleaning materials. Flexibility in compliance is provided for an owner or operator of a separate coating line at an automobile and light-duty truck assembly coating facility and an owner or operator of a facility that coats bodies or body parts for new heavier vehicles by the option to remain subject to the requirements of final-form § 129.52d or to elect to be subject to this final-form rulemaking. The final-form rulemaking provides flexibility to all of the potentially affected owners and operators by amending § 129.51(a) to extend its applicability to the owner and operator of a coating

operation subject to this final-form rulemaking. Section 129.51(a) authorizes the owner or operator to achieve compliance through an alternative method, which would achieve VOC emission reductions equal to or greater than those of the final-form rulemaking, by submitting the alternative method to the Department for review and approval in an applicable plan approval or operating permit, or both.

The VOC 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 consistent 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 111 tons of VOC emissions per year from the ten potentially subject facilities identified by the Department in its databases that are likely to be subject at or above the applicability threshold of 15 pounds (6.8 kilograms) per day of total actual VOC emissions, including VOC emissions from related cleaning activities, before consideration of controls. The owners and operators of these ten facilities will be required to implement the VOC control measures of the final-form rulemaking 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 automobile and light-duty truck assembly coatings, heavier vehicle coatings and cleaning materials.

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 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 for compliance through the use of complying coating materials and through work practice standards for coating-related activities and cleaning materials. Flexibility in compliance is provided for an owner or operator of a separate coating line at an automobile and light-duty truck assembly coating facility and an owner or operator of a facility that coats bodies or body parts for new heavier vehicles by the option to remain subject to the requirements of final-form § 129.52d or to elect to be subject to this final-form rulemaking. The final-form rulemaking provides flexibility to all of the potentially affected owners and operators by amending § 129.51(a) to extend its applicability to the owner and operator of a coating operation subject to this final-form rulemaking. Section 129.51(a) authorizes the owner or operator to achieve compliance through an alternative method, which will achieve VOC emission reductions equal to or greater than those of the final-form rulemaking, by submitting the alternative method to the Department for review and approval in an applicable plan approval or operating permit, or both.

The development and implementation of a written work practice standard for the use and application of cleaning materials, as well as implementation of work practices for coating-related activities, is expected to result in a net cost savings for coating and cleaning materials and related activities for affected owners and operators. Implementing the required work practices for coating-related activities and cleaning materials should reduce the amounts of VOC emissions overall from coating operations by reducing the amounts of VOC-containing coating and cleaning materials that are lost to evaporation, spillage and waste, and reducing or eliminating associated VOC emissions, thereby reducing the costs of purchasing coating and cleaning materials for use in the operation as well as decreasing the amount of annual emissions fees that must be paid for VOC emissions.

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. 4351 (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. 4351 (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 and by adding § 129.52e 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