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Regulatory Analysis Form

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INDEPENDENT REGULATORY REVIEW COMMISSION

(1) Agency:
Environmental Protection

(2) Agency Number:
Identification Number: 7-492

IRRC Number: 3173.

(3) PA Code Cite: 25 Pa. Code Chapters 121 and 129

(4) Short Title: Control of VOC Emissions from Industrial Cleaning Solvents; General Provisions; Aerospace Manufacturing and Rework; and Additional RACT Requirements for Major Sources of NO_x and VOCs

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

- ☒ Proposed Regulation
- ☐ Final Regulation
- ☐ Final Omitted Regulation
- ☐ Emergency Certification Regulation;
  - ☐ Certification by the Governor
  - ☐ Certification by the Attorney General

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

This proposed rulemaking would amend Chapters 121 and 129 (relating to general provisions; and standards for sources) to add § 129.63a (relating to control of VOC emissions from industrial cleaning solvents) to adopt reasonably available control technology (RACT) requirements and RACT emission limitations for stationary sources of volatile organic compound (VOC) emissions from industrial cleaning solvents that are not regulated elsewhere in Chapter 129 or Chapter 130 (relating to standards for products). Amendments would be proposed for §§ 121.1 and 129.51 (relating to definitions; and general) to support the addition of § 129.63a.

Minor corrective amendments would be proposed for § 129.73 (relating to aerospace manufacturing and rework) to correct a numbering error in Table II (relating to allowable content of VOCs in aerospace coatings) that was promulgated at 29 Pa. B. 1879, 1887 (April 10, 1999). Clarifying amendments would be proposed for §§ 129.96, 129.97, 129.99, and 129.100 under the recently promulgated regulations for additional RACT requirements for major sources of nitrogen oxides (NO_x) and VOCs (RACT 2) to update the list of presumptive VOC RACT regulations for which RACT 2 does not apply and to clarify certain requirements. RACT 2 was promulgated at 46 Pa. B. 2036 (April 23, 2016).

Proposed § 129.63a would apply to the owner and the operator of a facility at which an industrial cleaning solvent is used or applied in a cleaning activity at a cleaning unit operation, a work production-related work area or a part, product, tool, machinery, equipment, vessel, floor, or wall, except as specified in § 129.63a(c), which lists exceptions and exemptions. A cleaning activity is the use or application of an industrial cleaning solvent to remove a contaminant, such as an adhesive, ink, paint, dirt, soil, oil, or grease, by wiping, flushing, brushing, soaking, spraying or a similar effort. The VOC emissions limitations, work practice requirements, compliance demonstration requirements, and recordkeeping and reporting

requirements would apply to the owner and the operator of a facility at which the total combined actual VOC emissions from all subject cleaning unit operations at the facility are equal to or greater than 2.7 tons (2,455 kilograms) per 12-month rolling period, before consideration of controls. The VOC emissions limitations and the work practice requirements would not apply to the owner or operator of a subject facility if the total combined actual VOC emissions from all subject cleaning unit operations at the facility are less than 2.7 tons (2,455 kilograms) per 12-month rolling period, before consideration of controls. An owner or operator claiming this exemption would be required to maintain monthly records to demonstrate that the subject VOC emissions are below 2.7 tons (2,455 kilograms) per 12-month rolling period.

Emissions of VOCs are precursors to the formation of ground-level ozone, a criteria air pollutant. Ground-level ozone forms from the photochemical reaction of emissions of NO_x and VOCs in the presence of sunlight. High concentrations of ground-level ozone air pollution are a serious threat to public health and welfare and the environment. The ground-level ozone air pollution reduction measures in proposed § 129.63a are reasonably necessary to attain and maintain the health-based and welfare-based ozone National Ambient Air Quality Standards (NAAQS) in this Commonwealth and to satisfy related Clean Air Act (CAA) (42 U.S.C.A. §§ 7401—7671q) requirements.

The Commonwealth must ensure that the ozone NAAQS are attained and maintained by implementing permanent and Federally-enforceable control measures. This proposed rulemaking will be submitted to the United States Environmental Protection Agency (EPA) for approval as a revision to the Commonwealth's State Implementation Plan (SIP) following promulgation of the final-form rulemaking. Control measures approved by the EPA as elements of the SIP are Federally-enforceable.

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

This proposed rulemaking is authorized under section 5(a)(1) of the Air Pollution Control Act (APCA) (35 P.S. § 4005(a)(1)), which grants the Environmental Quality Board (Board) the authority to adopt rules and regulations for the prevention, control, reduction and abatement of air pollution in this Commonwealth. Section 5(a)(8) of the APCA (35 P.S. § 4005(a)(8)) also grants the Board the authority to adopt rules and regulations designed to implement the provisions of the CAA.

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

Federal mandates

Yes. State regulations to control VOC emissions from existing stationary sources of industrial cleaning solvents are required under Federal law. The State regulation will be reviewed and 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 71 FR 58745, 58747 (October 5, 2006). 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) and 71 FR 78747.

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)), proposed § 129.63a establishes VOC emission limitations

and other requirements generally consistent with the EPA's recommendations in the *Control Techniques Guidelines: Industrial Cleaning Solvents*, EPA 453/R-06-001, Office of Air Quality Planning and Standards, EPA, September 2006 (Industrial Cleaning Solvents (ICS) Control Techniques Guidelines (CTG) (2006 ICS CTG)) as RACT for these sources in this Commonwealth. See *Consumer and Commercial Products, Group II: Control Techniques Guidelines in Lieu of Regulations for Flexible Packaging Printing Materials, Lithographic Printing Materials, Letterpress Printing Materials, Industrial Cleaning Solvents, and Flat Wood Panel Coatings,* 71 FR 58745.

Section 101(a)(3) of the CAA (42 U.S.C.A. § 7401(a)(3)) provides that air pollution prevention (that is, the reduction or elimination, through any measures, of the amount of pollutants produced or created at the source) and air pollution control at its source is the primary responsibility of states and local governments. Section 101(a)(4) of the CAA (42 U.S.C.A. § 7401(a)(4)) provides that Federal financial assistance and leadership is essential for the development of cooperative Federal, state, regional, and local programs to prevent and control air pollution.

Section 109(b) of the CAA (42 U.S.C.A. § 7409(b)) provides that the EPA Administrator must establish permissible ambient air limits, or NAAQS, for criteria air pollutants at levels that protect public health and welfare and the environment. The criteria air pollutants are commonly found throughout the United States and currently include six air pollutants: ground-level ozone, particle pollution (often referred to as particulate matter), carbon monoxide, sulfur dioxide, NO_x (with nitrogen dioxide (NO_2) as the indicator), and lead. These air pollutants, when present in sufficient concentration in the ambient air, can cause harm to public health and welfare as well as animal and plant health and welfare and to the environment.

The EPA calls these six principal air pollutants "criteria" air pollutants because it regulates them by developing human health-based or environmentally-based, or both, criteria (science-based guidelines) for setting permissible ambient air levels. The set of limits based on human health is called primary standards. The set of limits intended to prevent environmental and property damage is called secondary standards. Of the six criteria air pollutants, high concentrations of ground-level ozone and particle pollution are the most widespread health and welfare threats.

Section 110(a) of the CAA (42 U.S.C.A. § 7410(a)) provides that each state shall adopt and submit to the EPA a plan to implement measures [State Implementation Plan or "SIP"] to enforce the NAAQS or revision to the NAAQS promulgated under section 109(b) of the CAA. Section 172(c)(1) of the CAA provides that SIPs for nonattainment areas must include "reasonably available control measures," including "reasonably available control technology" or "RACT," for sources of emissions of NO_x and VOC. Section 182(b)(2) of the CAA (42 U.S.C.A. § 7511a(b)(2)) provides that for moderate ozone nonattainment areas, states must revise their SIPs to include RACT for sources of VOC emissions covered by a CTG document issued by the EPA prior to the area's date of attainment of the applicable ozone NAAQS. CTG documents provide states with information about a VOC emission source category and recommendations of what the EPA considers to be RACT for the source category to attain and maintain the applicable ozone NAAQS. State air pollution control agencies can use the Federal recommendations provided in the CTG to inform their own determination as to what constitutes RACT for VOC emissions from the covered source category for subject sources located within the state. 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. Control measures approved by the EPA as elements of the state's SIP are Federally-enforceable, ensuring the development of cooperative Federal, state, regional, and local programs to prevent and control air pollution.

Section 183(e) of the CAA (42 U.S.C.A. § 7511b(e)) directs the EPA to list for regulation those categories of products that account for at least 80% of the aggregate VOC emissions from consumer and commercial products in ozone nonattainment areas. Section 183(e)(3)(C) of the CAA (42 U.S.C.A. § 7511b(e)(3)(C)) further provides that the EPA may issue a CTG document in place of a National regulation for a product category on the section 183(e) list where the EPA determines that the recommendations of the CTG, when implemented by the affected states, will be "substantially as effective as regulations" in reducing emissions of VOC in ozone nonattainment areas. Under section 183(e) of the CAA, a National regulation for consumer or commercial products is limited to the measures applicable to manufacturers, processors, distributors, or importers of the solvents, materials, or products supplied to the consumer or industry. Section 183(e) of the CAA does not authorize the EPA to issue regulations that would directly regulate end-users of these products. By contrast, CTGs are guidance documents that recommend RACT measures that states can adopt and apply to the end-users of products. This dichotomy (i.e., that the EPA cannot directly regulate end-users under section 183(e) of the CAA, but can address end-users through a CTG) created by Congress is relevant to the EPA's evaluation of the relative merits of promulgating a National regulation for a source category versus issuing a CTG. See 71 FR 58747. Control measures consistent with recommendations provided in a CTG and approved by the EPA as elements of a State's SIP are Federally-enforceable.

In 1995, the EPA listed industrial cleaning solvents on its section 183(e) list and, in 2006, the EPA issued a CTG for this product category. See 60 FR 15264, 15267 (March 23, 1995); 71 FR 58745; and *Control Techniques Guidelines for Industrial Cleaning Solvents*, EPA 453/R-06-001, Office of Air Quality Planning and Standards, EPA, September 2006. The 2006 ICS CTG is available on the EPA website at: https://www.epa.gov/stationary-sources-air-pollution/clean-air-act-guidelines-and-standards-solvent-use-and-surface.

Section 184(a) of the CAA (42 U.S.C.A. § 7511c(a)) provides that the entire Commonwealth is included in the Ozone Transport Region (OTR) (www.otcair.org) established under section 184 of the CAA. Section 184(b) of the CAA (42 U.S.C.A. § 7511c(b)) addresses provisions for the SIP of a state included in the OTR. Section 184(b)(1)(B) of the CAA requires that states in the OTR, including this Commonwealth, submit a SIP revision requiring implementation of RACT for all sources of VOC emissions in the state covered by a specific CTG and not just for those sources that are located in designated nonattainment areas of the state. Consequently, the Commonwealth's SIP must include regulations applicable statewide to control VOC emissions from stationary sources of industrial cleaning solvents covered by the applicable CTG issued under the following notice: *Consumer and Commercial Products, Group II: Control Techniques Guidelines in Lieu of Regulations for Flexible Packaging Printing Materials, Lithographic Printing Materials, Letterpress Printing Materials, Industrial Cleaning Solvents, and Flat Wood Panel Coatings,* 71 FR 58745, 58747. In the 2006 notice of final determination and availability of final control techniques guidelines, the EPA determined that the recommendations of the 2006 ICS CTG would be substantially as effective as National regulations in reducing VOC emissions from the industrial cleaning solvents consumer and commercial products category in moderate ozone nonattainment areas. See 71 FR 58745, 58747.

The Department's Bureau of Air Quality reviewed the RACT recommendations regarding VOC emission reduction measures included in the 2006 ICS 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 and other requirements generally consistent with the recommendations provided in the 2006 ICS CTG are appropriate to be implemented in this Commonwealth as RACT for this source category. The VOC emission reduction measures included in proposed § 129.63a would achieve VOC emission reductions and lowered concentrations of ground-level ozone locally and would also reduce

the amounts of VOC emissions and ground-level ozone transported to downwind states. Adoption of VOC emission reduction requirements for these sources is part of the Commonwealth's strategy, in concert with other OTR jurisdictions, to further reduce the transport of VOC ozone precursors and ground-level ozone throughout the OTR to attain and maintain the 8-hour ozone NAAQS.

Deadlines for action

– *Section 182(b)(2) of the CAA*

Section 182(b)(2) of the CAA (42 U.S.C.A. § 7511a(b)(2)) requires that a CTG issued by the EPA after November 15, 1990, include the date by which states subject to section 182(b) of the CAA must submit SIP revisions in response to the CTG. The EPA issued the 2006 ICS CTG on October 5, 2006. See 71 FR 58745. The EPA provided a 1-year period for the required SIP submittal, making SIP revisions for implementation of the 2006 ICS CTG recommendations due by October 5, 2007. See 71 FR 58745, 58748.

– *Implementation of the 2008 National Ambient Air Quality Standards for Ozone: State Implementation Plan Requirements*

The EPA published the notice of final rulemaking for the Implementation of the 2008 National Ambient Air Quality Standards for Ozone: State Implementation Plan Requirements on March 6, 2015 (80 FR 12264). The EPA stated that RACT SIP revisions for areas designated as nonattainment for the 2008 ozone NAAQS would be due no later than 24 months after the effective date of designation of an area as nonattainment for the 2008 ozone NAAQS. The EPA stated further that RACT measures for the 2008 ozone 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 for the 2008 ozone NAAQS were effective on July 20, 2012. Consequently, RACT measures for the 2008 8-hour ozone NAAQS must be implemented by January 1, 2017. While the implementation date for proposed § 129.63a will occur later than January 1, 2017, the Department will move forward as quickly as possible toward finalizing the proposed ICS VOC emission reduction measures and submitting the SIP revision to the EPA.

– *Complaint filed in the United States District Court for the Northern District of California*

On July 21, 2016, three environmental groups filed a complaint in the United States District Court for the Northern District of California (*Center for Biological Diversity v. EPA,* N.D. Cal, No. 4:16-cv-04092) alleging that the EPA failed to make findings of a failure to submit under section 110(k)(1)(B) of the CAA and to publish notice of those findings in the Federal Register for specified nonattainment areas and specified SIP elements for the 2008 ozone NAAQS. The Commonwealth was listed in the lawsuit as failing to submit specified SIP revisions including the 2006 ICS CTG RACT elements.

– *Potential consequences for missing the deadline*

Section 179 of the CAA (42 U.S.C.A. § 7509) provides that if the EPA Administrator finds that a state has failed to submit an acceptable implementation plan (i.e., "failure to submit" finding), sanctions will be imposed. Sanctions cannot be imposed until 18 months after the Administrator makes the "failure to submit" finding and sanctions cannot be imposed if a deficiency has been corrected within the 18-month period after the finding. Consequently, when the EPA publishes its finding in the *Federal Register,* the Commonwealth will be subject to sanctions if this proposed rulemaking is not finalized and submitted to the

EPA as a SIP revision and determined by the EPA to be complete within 18 months of the date of publication.

On February 3, 2017, the EPA published a finding that the District of Columbia and 15 states, including the Commonwealth, failed to submit SIP revisions in a timely manner to satisfy certain requirements for the 2008 ozone NAAQS that apply to the OTR. See 82 FR 9158. The finding related to the Commonwealth is based on its failure to submit certain required RACT SIP elements, including RACT for industrial cleaning solvents, by July 20, 2014. See 82 FR 9160. The effective date of the finding of failure to submit is March 6, 2017. The Commonwealth must submit the missing SIP elements to the EPA by 18 months from the effective date, or September 6, 2018. The timely submission of a SIP revision based on this proposed rulemaking, when promulgated, is necessary to avoid costs to the Commonwealth from potential sanctions imposed by the EPA under section 179 of the CAA. Consequently, the Commonwealth will be subject to sanctions if this proposed rulemaking is not promulgated and submitted to the EPA as a SIP revision and determined by the EPA to be complete by September 6, 2018.

Section 179 of the CAA authorizes the EPA to use two types of sanctions: 1) imposing what are called "2:1 offsets" on new or modified sources of emissions; and 2) withholding of certain Federal highway funds. Under section 179 of the CAA and its implementing regulations, the Administrator first imposes 2:1 emission offset sanctions on the new or modified major stationary sources in the nonattainment area, and then, if the deficiency has not been corrected within 6 months, also applies Federal highway funding sanctions. See 40 CFR 52.31 (relating to selection of sequence of mandatory sanctions for findings made pursuant to section 179 of the Clean Air Act). The EPA may reverse the order of sanctions under 40 CFR 52.31(d)(6). The Commonwealth receives approximately $1.6 billion in Federal transportation funding annually, which would be at risk if the Commonwealth does not implement RACT requirements for the control of VOC emissions from industrial cleaning solvents as quickly as possible in order to avoid sanctions.

The Department intends to move the proposed rulemaking through the regulatory rulemaking process as quickly as possible to avoid sanctions required by the CAA to be imposed on September 6, 2018.

Proposed revisions for §§ 121.1, 129.51, 129.73, 129.96, 129.97, 129.99, and 129.100

The proposed revisions for §§ 121.1, 129.51, 129.73, 129.96, 129.97, 129.99, and 129.100 are clarifying amendments only. These revisions are not mandated by any Federal or state law or court order, or Federal regulation. These proposed revisions do not have deadlines.

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

The proposed rulemaking would implement control measures and other requirements in § 129.63a to reduce VOC emissions from the use and application of industrial cleaning solvents by the owner and the operator of a facility at which an industrial cleaning solvent is used or applied in a cleaning activity at a cleaning unit operation or work production-related work area that is not regulated elsewhere in Chapters 129 and 130. The proposed VOC emission control measures and other requirements in § 129.63a are generally consistent with the recommendations in the EPA's 2006 ICS CTG and would reduce VOC emissions from the industrial cleaning solvents source category throughout this Commonwealth at those affected sources that do not already comply with the proposed control measures.

The proposed revisions for §§ 121.1, 129.51, 129.73, 129.96, 129.97, 129.99, and 129.100 are clarifying amendments only. These revisions would not provide additional VOC emission reduction benefits beyond what these regulations already achieve.
Emissions of VOCs are precursors to the formation of ground-level ozone, a criteria air pollutant. Ground-level ozone is not emitted directly to the atmosphere by the use and application of industrial cleaning solvents, but forms by a photochemical reaction between VOCs and NO_x in the presence of sunlight. The EPA regulates ground-level ozone as a criteria air pollutant because of its widespread adverse health and environmental effects. Exposure to high concentrations of ground-level ozone is a serious human and animal health and welfare threat, causing respiratory illnesses and decreased lung function, agricultural crop loss, visible foliar injury to sensitive plant species, and damage to forests, ecosystems, and infrastructure.

Adoption of the proposed VOC emission control measures and other requirements in § 129.63a would allow the Commonwealth to make substantial progress in achieving and maintaining the 1997 and 2008 8-hour ozone NAAQS statewide; implementation of and compliance with the proposed VOC emission reduction measures would also assist the Commonwealth in reducing the levels of ozone precursor emissions that contribute to potential nonattainment of the 2015 ozone NAAQS. The VOC emission control measures in proposed § 129.63a are reasonably necessary to attain and maintain the health-based and welfare-based 8-hour ozone NAAQS in this Commonwealth and to satisfy related CAA requirements.

The Department estimates that implementation of the proposed control measures in § 129.63a could generate VOC emission reductions of as much as 12,499 tons per year (tpy); these reductions would benefit the health and welfare of the approximately 12.77 million residents and the numerous animals, crops, vegetation, and natural areas of this Commonwealth by reducing the amount of ground-level ozone air pollution created by this industry sector. Ground-level ozone air pollution can also be transported downwind via regional air currents and meteorological events. Reductions of ground-level ozone in this Commonwealth will therefore also benefit the residents of downwind states and downwind environments.

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

The EPA promulgated the ground-level ozone NAAQS in July 1997 at 0.08 part per million (ppm) averaged over 8 hours. See 62 FR 38855 (July 18, 1997). Because ozone ambient air monitoring data is measured out to three decimal places, the standard effectively became 0.084 ppm because of rounding; areas with ozone levels as high as 0.084 ppm (84 parts per billion (ppb)) were considered as meeting the 0.08 ppm standard. In 2004, the EPA designated 37 counties in this Commonwealth as 8-hour ozone nonattainment areas for the 1997 8-hour ozone NAAQS. See 69 FR 23858, 23931 (April 30, 2004). Based on the certified ambient air monitoring data for the 2015 ozone season as well as the preliminary 2016 ozone season data, all monitored areas of the Commonwealth are attaining the 1997 8-hour ozone NAAQS. Maintenance plans have been submitted to the EPA and approved for the 1997 ozone standard. Section 175A(a) of the CAA (42 U.S.C.A. § 7505a(a)) prescribes that the maintenance plans include permanent and enforceable control measures that will provide for the maintenance of the 1997 ozone NAAQS for at least 10 years following the EPA's redesignation of the areas to attainment of the 1997 ozone standard. Section 175A(b) of the CAA (42 U.S.C.A. § 7505a(b)) prescribes that 8 years after the EPA redesignates an area to attainment of the applicable ozone NAAQS, additional maintenance plans approved by the EPA must also provide for the maintenance of the ozone standard for another 10 years following the expiration of the initial 10-year period. Implementation of the proposed VOC emission control measures for the use and application of industrial cleaning solvents would allow the Commonwealth to continue to attain and maintain the 1997 ozone NAAQS.

In March 2008, the EPA lowered the ozone NAAQS to 0.075 ppm (75 ppb) averaged over 8 hours to provide greater protection for children, other at-risk populations and the environment against the array of ozone-induced adverse health and welfare effects. See 73 FR 16436 (March 27, 2008). In April 2012, the EPA designated five areas in this Commonwealth as nonattainment for the 2008 ozone NAAQS. See 77 FR 30088, 30143 (May 21, 2012). These areas include all or a portion of Allegheny, Armstrong, Beaver, Berks, Bucks, Butler, Carbon, Chester, Delaware, Fayette, Lancaster, Lehigh, Montgomery, Northampton, Philadelphia, Washington, and Westmoreland Counties. With regard to the 2008 ozone NAAQS, the certified 2015 ambient air ozone season monitoring data indicate that all areas of this Commonwealth are monitoring attainment of the 2008 ozone NAAQS. The Department's analysis of the preliminary 2016 ambient air ozone season monitoring data shows that all ozone samplers in this Commonwealth, except the Bristol sampler in Philadelphia County, are monitoring attainment of the 2008 ozone NAAQS. As with the 1997 ozone NAAQS, the Department must ensure that the 2008 ozone NAAQS is 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 violating monitors in New Jersey and Maryland. Adoption of the proposed VOC emission control measures in § 129.63a would allow the Commonwealth to continue its progress in attaining and maintaining the 2008 8-hour ozone NAAQS.

On October 1, 2015, the EPA again lowered the ozone NAAQS, this time to 0.070 ppm (70 ppb) averaged over 8 hours. See 80 FR 65292 (October 26, 2015). Based on certified ambient air monitoring data for the 2013-2015 ozone seasons, eight monitors in Pennsylvania have design values that violate the 2015 ozone NAAQS. The monitors are located in Allegheny, Armstrong, Bucks, Delaware, Indiana, Lebanon, Montgomery, and Philadelphia Counties. Preliminary ambient air ozone monitoring data for the 2014-2016 ozone seasons, however, indicate that six counties have design values that violate the 2015 ozone NAAQS. These six monitors are located in Allegheny, Berks, Bucks, Delaware, Montgomery, and Philadelphia Counties. As required under section 107(d) of the CAA (42 U.S.C.A. § 7407), the Commonwealth submitted designation recommendations for the 2015 ozone NAAQS to the EPA on October 3, 2016. The designation recommendations were based on the ambient ozone concentrations from the 2013-2015 ozone seasons. The EPA is expected to issue final designations for attainment, nonattainment, and unclassifiable areas for the 2015 ozone NAAQS in December 2017. Following designation of nonattainment areas for the 2015 ozone NAAQS, the Department must ensure that the 2015 ozone NAAQS is attained and maintained by implementing permanent and Federally-enforceable control measures as necessary and appropriate. Implementation of and compliance with the proposed VOC emission reduction measures in § 129.63a would assist the Commonwealth in reducing the levels of ozone precursor emissions that contribute to potential nonattainment of the 2015 ozone NAAQS.

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

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

[1] *Regulatory Impact Analysis, Final National Ambient Air Quality Standard for Ozone*, July 2011, http://www.nrc.gov/docs/ML1224/ML12240A237.pdf.

[2] *Regulatory Impact Analysis of the Final Revisions to the National Ambient Air Quality Standards for Ground-Level Ozone*, September 2015, https://www3.epa.gov/ttnecas1/docs/ria/naaqs-o3_ria_final_2015-09.pdf.

The Department is not stating that these estimated monetized health benefits would all be the result of implementing the proposed RACT measures, but the EPA estimates are indicative of the benefits to Commonwealth residents of attaining the 2008 and 2015 8-hour ozone NAAQS through the implementation of a suite of measures to control VOC emissions in the aggregate from different source categories.

Adverse health and welfare effects of ground-level ozone on humans, animals, and the environment

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

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

Adverse effects of ground-level ozone on the Commonwealth's economy

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

Information about the economic benefit of the Pennsylvania agricultural industry to the Commonwealth is provided by the Pennsylvania Department of Agriculture. Pennsylvania's 59,000 farm families are the stewards of more than 7.7 million acres of farmland. With $7.5 billion in cash receipts annually from production agriculture, Pennsylvania farmers and agribusinesses are the leading economic driver in our state. In addition to production agriculture, the industry also raises revenue and supplies jobs through

support services such as food processing, marketing, transportation, and farm equipment. In total, production agriculture and agribusiness contributes nearly $75 billion to Pennsylvania's economy and nearly 500,000 jobs.[3] These families, farms, and related businesses benefit directly from the reduction of ground-level ozone air pollution concentrations to attain and maintain the ozone NAAQS.

The Pennsylvania Department of Conservation and Natural Resources (DCNR) is the steward of the state-owned forests and parks. DCNR awards millions of dollars in construction contracts each year to build and maintain the facilities in its parks and forests. Hundreds of concessions throughout the park system help complete the park experience for both state and out-of-state visitors. Pennsylvania's 2.2 million-acre state forest system, found in 48 of Pennsylvania's 67 counties, comprises 13% of the forested area in the Commonwealth.[4] The state forest represents one of the largest expanses of public forestland in the eastern United States, making it a truly priceless public asset. The state forest provides an abundance of high quality forest products, which help to support a forest products industry with sales in excess of $11.5 billion annually, a total economic impact of $19 billion annually, and that employs in excess of 58,000 people.[5]

Information about Pennsylvania's hardwoods industry is provided by the Pennsylvania Department of Agriculture in its 2009-2010 biennial Hardwoods Development Council report. The following information and references are found in that report. Pennsylvania leads the nation in growing volume of hardwood species, with 17 million acres in forest land. As the leading producer of hardwood lumber in the United States, Pennsylvania also leads in the export of hardwood lumber, exporting nearly $800 million annually in lumber, logs, furniture, and paper products to more than 70 countries around the world. Recent U.S. Forest Service data shows that the state's forest growth-to-harvest rate is better than 2 to 1. This vast renewable resource puts the hardwoods industry at the forefront of manufacturing in the Commonwealth. Through 2006, the total annual direct economic impact generated by Pennsylvania's wood industry was $18.4 billion. The industry employed 128,000 people, with $4.7 billion in wages and salaries earned. Production was 1.1 billion board feet of lumber annually. (Strauss, Lord, Powell; PSU, June 2007).[6]

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[3] Pennsylvania Department of Agriculture, 2016, About PDA, http://www.agriculture.pa.gov/Pages/About-PDA.aspx and Fast Facts on Agriculture and Food Careers in Pennsylvania, December 10, 2015, http://www.agriculture.pa.gov/Encourage/Documents/Fast%20Facts%20on%20Agriculture%20and%20Food%20Careers%20in%20Pennsylvania%20(revised).pdf.

[4] Pennsylvania Department of Conservation and Natural Resources, 2016, DCNR Bureau of Forestry, Our Mission and What We Do, http://www.dcnr.state.pa.us/cs/groups/public/documents/document/dcnr_010470.pdf.

[5] Pennsylvania Department of Conservation and Natural Resources, Bureau of Forestry, 2016 State Forest Resource Management Plan, page 20. http://www.dcnr.state.pa.us/forestry/stateforestmanagement/sfrmp/2016sfrmp/index.htm

[6] Pennsylvania Hardwoods Development Council Biennial Report, 2009-2010. A copy of this document is available from the Bureau of Air Quality upon request.

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

The VOC emission limitations and other requirements included in proposed § 129.63a are not more stringent than the recommendations included in the Federal 2006 ICS CTG upon which proposed § 129.63a is based. Proposed § 129.63a is designed to adopt VOC emission limitations and control measures for the use and application of industrial cleaning solvents that are generally consistent with the standards and recommendations in the 2006 ICS CTG to meet the requirements of sections 172(c)(1), 182(b)(2) and 184(b)(1)(B) of the CAA. Proposed § 129.63a would apply the control measures across this entire Commonwealth, as required by section 184(b)(1)(B) of the CAA.

Section 183(e) of the CAA 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 where the EPA determines that the recommendations of the CTG, when implemented by the affected states, will be "substantially as effective as regulations" in reducing emissions of VOC in ozone nonattainment areas. State air pollution control agencies may use the Federal recommendations provided in the CTG to inform their own determination as to what constitutes RACT for VOC emissions from sources included in the covered category. State air pollution control agencies may implement other technically-sound approaches that are consistent with the CAA requirements and the recommendations of the EPA implementing regulations or guidelines.

In 1995, the EPA listed industrial cleaning solvents on its section 183(e) list and, in 2006, the EPA issued a CTG for this product category. See 60 FR 15264, 15267; 71 FR 58745; and *Control Techniques Guidelines for Industrial Cleaning Solvents*, EPA 453/R-06-001, Office of Air Quality Planning and Standards, EPA, September 2006. The Industrial Cleaning Solvents CTG is available on the EPA website at: https://www.epa.gov/stationary-sources-air-pollution/clean-air-act-guidelines-and-standards-solvent-use-and-surface. When developing the RACT measures included in its 2006 ICS CTG, the EPA took into account the data collected during the development of the 1994 Alternative Control Techniques (ACT) document. See EPA 2006 ICS CTG, Appendix A (*Alternative Control Techniques Document—Industrial Cleaning Solvents*, EPA-453/R-94-015, February 1994).

The ground-level ozone air pollution reduction measures in § 129.63a of this proposed rulemaking are reasonably necessary to attain and maintain the health-based and welfare-based ozone NAAQS in this Commonwealth and to satisfy related CAA requirements.

The proposed revisions for §§ 121.1, 129.51, 129.73, 129.96, 129.97, 129.99, and 129.100 are clarifying amendments only. The emission control limitations, reduction measures, and other requirements in these sections are not being amended in this proposed rulemaking.

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

The VOC emission reduction measures and other requirements in § 129.63a of this proposed rulemaking are similar to the measures and requirements in regulations already adopted by Delaware, Maryland, and New Hampshire, which are members of the OTR, as is Pennsylvania. These proposed measures and requirements are also similar in many respects to the regulations adopted by Indiana, Missouri, and Ohio.

The measures and requirements in § 129.63a of this proposed rulemaking would have little or no effect on Pennsylvania's ability to compete with other states that have industrial cleaning solvent operations.

The proposed revisions for §§ 121.1, 129.51, 129.73, 129.96, 129.97, 129.99, and 129.100 are clarifying amendments only. These revisions would not impact Pennsylvania's ability to compete with other states that have similar regulations.

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

No.

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

The draft proposed Annex A was initially discussed with the advisory committees in 2014. The Air Quality Technical Advisory Committee (AQTAC) was briefed on the draft Annex A on February 20, 2014, and voted 6-4-1 to concur with the Department's recommendation to move the proposed rulemaking forward to the Board with consideration of the comments and concerns, including exemptions and exceptions for feasibility and technical concerns for specialty industries, discussed at the meeting. The draft proposed Annex A was discussed with the Small Business Compliance Advisory Committee (SBCAC) on April 23, 2014. The SBCAC voted unanimously to concur with the Department's recommendation to forward the proposed rulemaking to the Board, with consideration of flexibility for small businesses. The draft proposed Annex A was discussed with the Citizens Advisory Council (CAC) Policy and Regulatory Oversight (PRO) Committee on May 6, 2014. On the recommendation of the PRO Committee of the CAC, the CAC voted on June 17, 2014, to concur with the Department's recommendation to forward the proposed rulemaking to the Board for consideration.

After consideration of the comments and concerns discussed at the February 20, 2014, AQTAC meeting and the April 23, 2014, SBCAC meeting, and further research on the requirements of other states' regulations, the Department made revisions to the draft proposed Annex A and presented it to the advisory committees for a second time in 2016. Changes to the draft Annex A language for proposed § 129.63a were made to address AQTAC concerns about the VOC emissions threshold for implementing VOC emission reduction measures, exceptions and exemptions, daily recordkeeping, and clarity of language, as well as to address flexibility for small businesses as requested by the SBCAC. These changes included revising the VOC emissions threshold for implementing the VOC emissions reduction measures from 15 pounds (6.8 kilograms) per day to 2.7 tons (2,455 kilograms) over a 12-month rolling period. The emission of 2.7 tons (2,455 kilograms) of VOCs per 12-month rolling period is equivalent to an average daily emission rate of 15 pounds (6.8 kilograms) of VOC emissions per day, which is equivalent to the evaporation of approximately 2 gallons of VOC-containing industrial cleaning solvent per day. An exemption provision was added for the use or application of a noncomplying industrial cleaning solvent that is subject to a standard or specification required by the United States Department of Defense, Federal Aviation Administration, or other Federal government entity. Technical feasibility concerns for screen printers was also addressed under exceptions and exemptions by specifying that an industrial cleaning solvent used or applied for the cleaning of screen printing equipment has an as applied VOC content that does not exceed 4.2 lb VOC/gal (500 g VOC/l) of industrial cleaning solvent. Digital printing was also added to the list of exceptions and exemptions. Additionally, the revised draft proposed Annex A included minor clarifying

changes to § 129.73 to correct a numbering error in Table II and to delete a redundant phrase in the title of Table II. No changes were made to emission limits or other substantive requirements in this section.

The revised draft proposed Annex A was discussed with the AQTAC on February 11, 2016. AQTAC voted 15-2-0 to concur with the Department's recommendation to present the proposed rulemaking amendments to the Board for consideration. The revised draft proposed Annex A was discussed with the CAC PRO Committee on March 2, 2016. On the recommendation of the PRO Committee of the CAC, the CAC voted on March 15, 2016, to concur with the Department's recommendation to forward the proposed rulemaking to the Board. The revised draft proposed Annex A was discussed with the SBCAC on April 27, 2016. The SBCAC again voted unanimously to concur with the Department's recommendation to forward the proposed rulemaking to the Board.

The AQTAC, SBCAC, and CAC meetings are advertised and open to the public.

The proposed revisions to §§ 129.96, 129.97, 129.99, and 129.100 were added after the revised draft proposed Annex A was discussed with the advisory committees. These proposed revisions are minor clarifying amendments made in response to the promulgation of the RACT 2 regulations on April 23, 2016. No changes are made to emission limits or other substantive requirements in these sections.

Additionally, after the revised draft proposed Annex A was discussed with the advisory committees, a revision was made to subsection 129.63a(h)(1)(i)(C) and (D) to clarify that the composite vapor pressure of the complying industrial cleaning solvent as supplied and as applied shall be determined in accordance with subsections (i) and (j). A revision was made to subsection (h)(2)(ii) to clarify that the composite vapor pressure as applied for the exempt industrial cleaning solvent shall be determined in accordance with subsections (i) and (j). A revision was made to subsection (h)(3)(ii) to clarify that the composite vapor pressure as applied for the screen printing equipment industrial cleaning solvent shall be determined in accordance with subsections (i) and (j). A revision was made to subsection (i) to add paragraph (3) to specify that the composite vapor pressure of organic compounds in cleaning unit operation industrial cleaning solvents may be determined through documentation provided by the manufacturer of the industrial cleaning solvent, including an MSDS, CPDS, or other data certified by the manufacturer. A revision was also made to subsection (j) to add paragraph (3) to specify that the vapor pressure of each single component compound in a cleaning unit operation industrial cleaning solvent may be determined through documentation provided by the manufacturer of the single component compound, including an MSDS, CPDS, or other data certified by the manufacturer. These revisions were made in response to a question asked by an AQTAC member at the February 11, 2016, meeting.

The Department will work with the Pennsylvania Small Business Development Center (SBDC) Environmental Management Assistance Program (EMAP) and the National Federation of Independent Business during the proposed rulemaking public comment period to assess impacts on, and to obtain feedback from, small business owners and operators.

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

Summary

The Department expects a maximum of about 576 facility owners and operators across the Commonwealth would potentially be subject to proposed § 129.63a. Of the 576 facility owners and operators, as many as 253 facility owners and operators may meet the definition of small business as defined in Section 3 of the Regulatory Review Act, 71 P.S. § 745.3. It is possible that far fewer than 576 facility owners and operators would be subject to proposed § 129.63a, depending on whether the VOC emissions are from a cleaning unit operation subject to an existing regulation elsewhere in Chapter 129 or Chapter 130, as well as depending on the accuracy of the self-reporting of facility owners and operators into the industry classification system used in North America.

The Department estimates that the annual financial impact on potentially affected Pennsylvania facility owners and operators could range from an average savings of $282 per affected facility owner and operator to an average cost of $27 per affected facility owner and operator. The estimated amount of VOC emission reductions from the potentially affected 576 facility owners and operators, including small businesses, could be as much as 12,499 tpy. The estimated average amount of potential VOC emission reductions per affected owner and operator could be approximately 22 tpy per affected facility (12,499 tpy/576 facilities).

Other potentially affected persons and businesses could include manufacturers, distributors, and sellers of complying and noncomplying industrial cleaning solvents due to restrictions on the VOC content of the materials, as well as the manufacturers, distributors, and sellers of VOC emission capture systems and add-on air pollution control devices. Estimating the numbers of these potentially affected persons and businesses is not feasible since this population includes entities outside of this Commonwealth for which the Department would not have records or data.

Types of persons, businesses, small businesses, and organizations that would be affected and how they are affected

The types of persons, businesses, small businesses, and organizations in this Commonwealth that would be affected by proposed § 129.63a vary. The 2006 ICS CTG states that the recommendations apply to industries that have to use organic solvent to conduct cleaning activities in cleaning unit operations such as mixing vessels (tanks), spray booths, and parts cleaners. The cleaning activities for the removal of foreign material from the substrate being cleaned include actions (activities) such as wiping, flushing, or spraying.[7]

The EPA listed 469 North American Industry Classification System (NAICS) codes for identifying businesses potentially covered by the recommendations of the 2006 Industrial Cleaning Solvents CTG. The complete list is found in the 2006 ICS CTG in Appendix C *Summary of NAICS Codes for nonattainment facilities estimated to meet the applicability criteria recommended in this CTG.* The NAICS is an industry classification system developed by Canada, Mexico, and the United States that groups establishments into industry groups based on the economic activities, producing and nonproducing, in which the establishment is primarily engaged. The NAICS is a two-digit through six-digit hierarchical classification code system,

[7] *Control Techniques Guidelines: Industrial Cleaning Solvents*, EPA 453/R-06-001, Office of Air Quality Planning and Standards, EPA, September 2006, page 5.

offering five levels of detail. Each digit in the code is part of a series of progressively narrower categories, and more digits in the code signify greater classification detail. The first two digits designate the economic sector. The third digit designates the subsector. The fourth digit designates the industry group. The fifth digit designates the NAICS industry, and the sixth digit designates the National industry. A complete and valid NAICS code contains six digits. See http://www.naics.com/frequently-asked-questions/, "*Why are some NAICS codes only 5-digits long?*" More information about the United States portion of the NAICS is available at http://www.census.gov/eos/www/naics/.

Proposed § 129.63a would apply to the owner and the operator of a facility that uses or applies an industrial cleaning solvent at a cleaning unit operation, a work production-related work area or a part, product, tool, machinery, equipment, vessel, floor, or wall. For purposes of proposed § 129.63a, an industrial cleaning solvent is a product formulated with one or more regulated VOCs. A cleaning activity is the use or application of an industrial cleaning solvent to remove a contaminant, such as an adhesive, ink, paint, dirt, soil, oil or grease. A cleaning unit operation is an operation at a facility that is a source of VOC emissions from a cleaning activity, including spray gun cleaning, spray booth cleaning, large manufactured components cleaning, parts cleaning, equipment cleaning, line cleaning, floor cleaning, tank cleaning, and small manufactured components cleaning. Cleaning unit operations would not include VOC emissions from the use of consumer products subject to §§ 130.201—130.471 (relating to subchapter B. consumer products), including an institutional product or industrial and institutional (I&I) product as defined in § 130.202 (relating to definitions) for cleaning offices, bathrooms, or other areas that are not part of a cleaning unit operation or work production-related work area.

The VOC emission limitations of proposed § 129.63a(e) would not apply to the owner and operator of a cleaning unit operation associated with certain categories specified under exceptions and exemptions in proposed subsection (c). The proposed VOC emission limitations would not apply to the owner and operator of a cleaning unit operation that uses a noncomplying industrial cleaning solvent subject to a standard or specification required by the United States Department of Defense, Federal Aviation Administration, or other Federal government entity, or that uses an industrial cleaning solvent associated with the cleaning of screen printing equipment if the industrial cleaning solvent has an as applied VOC content that does not exceed 4.2 lb VOC/gal solvent (500 g VOC/l solvent). These owners and operators would still be subject to the work practice requirements for industrial cleaning solvents, used shop towels, and waste materials and to the specified recordkeeping and reporting requirements of proposed § 129.63a(f) and (h).

Proposed § 129.63a(e) would establish VOC emission limitations for the use or application of an industrial cleaning solvent in a subject cleaning unit operation for the owner and operator of a facility at which the total combined actual VOC emissions from all subject cleaning unit operations at the facility are equal to or greater than 2.7 tons (2,455 kilograms) per 12-month rolling period, before consideration of controls.

Proposed § 129.63a(e) would establish a presumptive VOC content limit of less than or equal to 0.42 lb VOC/gal solvent (50 g VOC/l solvent) of industrial cleaning solvent as applied, as well as an alternative presumptive VOC composite vapor pressure limit of less than or equal to 8 millimeters of Mercury (mmHg) at 68°F (20°C) of industrial cleaning solvent as applied. The proposed alternative presumptive limit for VOC composite vapor pressure would ensure that many of the industrial cleaning solvents most commonly used for affected cleaning activities, like mineral spirits, Stoddard solvent, and medium to heavier weight petroleum naphtha, would comply with the emissions limitations in proposed § 129.63a.

An affected owner or operator could also choose to comply through the installation and use of a VOC emissions capture system and add-on air pollution control device. The overall emission reduction of the

VOC emissions capture system and add-on air pollution control device, as determined by the specified test methods and procedures, may be no less than 85% or may be no less than the equivalent efficiency as calculated by the specified equation, whichever is less stringent.

Proposed § 129.63a(f) would establish work practice standards for the use, storage, and disposal of industrial cleaning solvents, used shop towels, and waste materials by the owner and operator of a subject facility at which the total combined actual VOC emissions from all cleaning unit operations at the facility are equal to or greater than 2.7 tons (2,455 kilograms) per 12-month rolling period, before consideration of controls.

Proposed § 129.63a(h) would establish monthly recordkeeping requirements for the owner and operator of a subject facility, regardless of the total amount of combined actual VOC emissions from all cleaning unit operations at the facility. Recordkeeping requirements are expected to be minimal for the affected facility owners and operators; the recordkeeping requirements for many affected facility owners and operators would likely be met by using the monthly purchase records and material safety data sheets (MSDS) that most facility owners and operators already keep for other purposes.

The numbers of persons, businesses, small businesses, and organizations that would be affected

– The EPA's estimate of affected Pennsylvania facility owners and operators, based on the 2002 National emissions inventory

The EPA estimated that as many as 166 Pennsylvania facility owners and operators would be subject to the recommended control measures provided in the 2006 ICS CTG. See 2006 ICS CTG, Appendix D, *Number of nonattainment facilities organized by State that are estimated to meet the applicability criteria recommended in the CTG.* The EPA number of potentially affected facility owners and operators is based on data from the 2002 EPA National Emissions Inventory (NEI).

– Small Business Development Center's Environmental Management Assistance Program

The Department expects that the universe of potentially affected facility owners and operators could be larger than the group of 166 facility owners and operators identified by the EPA due to the proposed threshold of 2.7 tons of VOC emissions per 12-month rolling period, before consideration of controls, for implementation of the VOC emissions control measures. This threshold is equivalent to an average daily emission rate of 15 pounds (6.8 kilograms) of VOC emissions per day, which is equivalent to the evaporation of approximately 2 gallons of VOC-containing industrial cleaning solvent per day. The Department therefore requested the assistance of the Commonwealth's Small Business Development Center's (SBDC) Environmental Management Assistance Program (EMAP) in generating a list of potentially affected businesses in this Commonwealth.

The SBDC EMAP provided the Department with a list of potentially affected businesses in this Commonwealth using the 469 NAICS codes included in the 2006 ICS CTG. The initial list identified 144,222 facilities of all sizes. It is likely that many of the facility owners and operators identified by the SBDC EMAP solely through the use of the EPA list of NAICS codes may be subject to other regulations codified in Chapter 129 or Chapter 130 and therefore not subject to proposed § 129.63a. The Department has found that NAICS classifications tend to be broad in scope and lists of potentially affected facility owners and operators generated by NAICS codes may include a large number of facility owners and operators that are not engaged in the specific activities covered under a proposed rulemaking. Further, it is important to note that a business owner or operator is allowed to select and self-report the NAICS code of

its choosing. Prior experience by Department staff has shown that this self-reporting of NAICS codes is problematic when trying to accurately identify potentially affected facility owners and operators in this Commonwealth.

Upon further research on how to meaningfully analyze the list of 144,222 potentially affected facility owners and operators identified by the SBDC EMAP through the NAICS codes, the Department reviewed an analysis prepared in 2010 by E.H. Pechan & Associates, Inc. (Pechan) for the State of Texas Commission on Environmental Quality (TCEQ). The analysis was used by the TCEQ to assess the impact of its proposed industrial cleaning solvents rulemaking, finalized December 29, 2011, on the Texas business community. The survey data and statistical analysis generated by Pechan appeared to provide a better representation of the potentially affected industry and the impact of the Texas industrial cleaning solvents rulemaking than the general guidance provided in the 2006 ICS CTG. The Department applied a process similar to the one used by Pechan for the TCEQ analysis to estimate the number of Pennsylvania businesses potentially impacted by proposed § 129.63a.

The Department cross-referenced the NAICS codes from the SBDC EMAP list of 144,222 facilities with the list of NAICS codes generated by Pechan as being potentially subject to the Texas industrial cleaning solvents rulemaking. Ten NAICS codes from the Pechan Texas report list were identified in the SBDC EMAP list. This cross-referencing reduced the number of potentially affected facility owners and operators in this Commonwealth to 45,718. From the Pechan analysis, it was further determined that only about 1.26% of identified facilities in Texas would likely be subject to the Texas industrial cleaning solvents rulemaking. Applying the same percentage to the Commonwealth's 'universe' of 45,718 identified by the SBDC EMAP, the Department estimated that as many as 576 (45,718 x 1.26%) facility owners and operators in this Commonwealth may potentially be subject to proposed § 129.63a. Also from the Pechan analysis, it was determined that 44% of the potentially subject facilities in Texas were likely small businesses. Applying this percentage to the potentially subject group of 576 facility owners and operators identified by the SBDC EMAP, the Department estimated that 253 (576 x 44%) facility owners and operators may be small businesses.

– Department databases

The Department also gathered information about potentially affected facility owners and operators from the Environmental Facility Application Compliance Tracking System (eFACTS) database and the Air Information Management System (AIMS) database. These are Department databases that share data and interface with each other. The eFACTS database contains facility-specific information, including the NAICS code, for permitted facilities and some previously inspected facilities for which permits are not required. The AIMS database contains site-specific source and air pollutant emissions data, as well as NAICS codes, to maintain the air quality emission inventory. The AIMS and eFACTS systems do not provide an exhaustive list of all facility owners and operators that conduct industrial cleaning solvent activities in this Commonwealth. The databases include only those with which the Department has had contact and for which the Department has a reason to input data; these are usually the largest emitters of air pollutants, which may or may not meet the definition of "small business" in accordance with Section 3 of the Regulatory Review Act.

A search of the AIMS and eFACTS databases revealed that the owners or operators of approximately 3,154 facilities in this Commonwealth have a permit issued by the Department that includes provisions for the control of VOC emissions from industrial cleaning solvent processes. Using the factor of 1.26% developed by Pechan for the Texas analysis, the Department estimates that approximately 40 (1.26% x 3,154) of these permitted facility owners and operators would be subject to the requirements of proposed § 129.63a. The

remaining 3,114 permitted facility owners and operators are likely subject to cleaning solvent requirements codified elsewhere in Chapter 129 or Chapter 130 and therefore reflected in the exceptions listed in § 129.63a(c). Of the potentially affected 40 permitted facility owners and operators, the Department applied the 44% factor developed by Pechan to calculate that as many as 18 (40 x 44%) facility owners and operators identified from the Department's databases may be small businesses.

Financial impact on affected facility owners and operators and on small businesses

The Department expects the impact of the requirements of proposed § 129.63a on affected owners and operators, including small businesses, would be minimal. The owner and operator of a facility that would be subject to proposed § 129.63a would likely incur a cost benefit or incur little, if any, cost to implement the requirements of proposed § 129.63a. VOC compliant solvents are readily available, and industrial cleaning solvents such as Stoddard solvent, mineral spirits, and most other common solvents provided by suppliers have vapor pressures well below the 8 mmHg at 68°F (20°C) limit specified in proposed § 129.63a(e). The owners and operators of potentially affected facilities such as automobile repair garages and metal parts manufacturing facilities using these materials would likely not have to make any changes to their industrial cleaning solvents.

The EPA based the costs of complying with the recommended control measures on the costs of operating a parts cleaner using industrial cleaning solvents. The Department regulates the VOC emissions from parts cleaners under existing § 129.63 (relating to degreasing operations), but the types of industrial cleaning solvents used in parts cleaners and in other solvent cleaning activities are the same. The EPA estimated in the 2006 ICS CTG that the annual costs for operating a mineral spirits parts cleaner were about $1,453. The costs of switching to aqueous parts cleaners would range from $1,171 to $1,480. The owners and operators of affected facilities could incur an annual increase of as much as 1.8% in cleaning costs ($1,480 - $1,453/$1,453 = 1.8%) or realize an annual cost savings of as much as 19% ($1,453 - $1,171/$1,453 = 19%) as a result of switching to aqueous parts cleaning solvents.

Pechan's cost analysis for the Texas rulemaking updated the savings cited in the 2006 ICS CTG through the use of updated cost factors. The 2010 Pechan report for Texas estimated that small businesses in Texas would save an average of $2,760 annually from adoption of the 2006 ICS CTG recommendations. Based upon Pechan's estimated cost savings for Texas and upon the EPA's estimated overall cost savings in the 2006 ICS CTG, it is likely that Pennsylvania businesses would see similar cost savings as a result of implementing proposed § 129.63a because low-VOC content industrial cleaning solvent materials are readily available at a cost that is equal to or lower than the high-VOC content industrial cleaning solvent materials they replace as a result of similar requirements already in effect in neighboring states.

Using the EPA cost number of $1,453 as the baseline for annual operating costs and the cost range of $1,171 to $1,480 to implement the recommended control measures, the Department calculated that the annual financial impact on potentially affected Pennsylvania facility owners and operators could range from an average savings of $282 per affected facility owner and operator to an average cost of $27 per affected facility owner and operator. Please see the response to Question 19 for more detail on the potential costs and savings.

Incorporation of proposed requirements into existing operating permits

The VOC emission limitations and other requirements established by proposed § 129.63a would not require the submission of plan approval applications or applications for permit modifications for amendments to existing operating permits. These requirements would be incorporated as applicable requirements in the

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

No new legal, accounting or consulting procedures are contained in this proposed rulemaking.

Effects of the proposed revisions to §§ 121.1, 129.51, 129.73, 129.96, 129.97, 129.99, and 129.100

The proposed revisions to §§ 121.1, 129.51, 129.73, 129.96, 129.97, 129.99, and 129.100 are clarifying amendments only. These revisions would not change the types or numbers of persons, businesses, small businesses, or organizations affected by these regulations or the financial impact of these regulations on affected facility owners and operators or small businesses.

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

The Department estimates that as many as 576 facility owners and operators across this Commonwealth could be affected by the proposed measures for control of VOC emissions from industrial cleaning solvents. About 253 of these potentially subject facility owners and operators may meet the definition of small business (as defined in Section 3 of the Regulatory Review Act, Act 76 of 2012). The measures in proposed § 129.63a could affect the owners and operators of facilities involved in food manufacturing, wood and wood product manufacturing, fabricating metals, manufacturing and assembling industrial machinery and transportation equipment, fiber and fabric manufacturing, and other industries, if the potentially subject owners and operators are not already in compliance with the applicable requirements in proposed § 129.63a.

It is possible that proposed § 129.63a would also apply to the owners and operators of industrial cleaning solvent operations at facilities that have not yet been identified. Please see the response to Question 15 for discussion of how the Department estimated the number of potentially subject facility owners and operators.

The proposed revisions for §§ 121.1, 129.51, 129.73, 129.96, 129.97, 129.99, and 129.100 are clarifying amendments only. These revisions would not change the types or numbers of persons, businesses, small businesses, or organizations required to comply with these regulations.

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

Summary

The Department expects that the financial impact on individuals, small businesses, businesses, and labor communities would be minimal. The owner and operator of a facility that would be subject to the proposed measures for control of VOC emissions from industrial cleaning solvents would likely incur little, if any, cost to implement the requirements of proposed § 129.63a. Industrial cleaning solvents such as Stoddard solvent, mineral spirits, and most other common solvents provided by suppliers have vapor pressures well

below the 8 mmHg at 68°F (20°C) limit specified in proposed § 129.63a. The owners and operators of potentially affected facilities such as automobile repair garages and metal parts manufacturing facilities using these common industrial cleaning solvent materials would not likely have to make any changes to their cleaning materials. The estimated average amount of potential VOC emission reductions per affected owner and operator could be approximately 22 tpy per affected facility with an annual financial impact ranging from an average savings of $282 per affected facility owner and operator to an average cost of $27 per affected facility owner and operator. The Department expects the regulated industry in this Commonwealth to realize cost savings because low-VOC content industrial cleaning solvent materials are readily available at a cost that is equal to or lower than the high-VOC content industrial cleaning solvent materials they replace as a result of similar requirements already in effect in neighboring states.

Estimated amount of potential VOC emission reductions

Appendix D of the 2006 ICS CTG listed the estimated number of nonattainment facilities identified by the EPA in each state that were expected to meet the applicability criteria recommended in the 2006 ICS CTG. The table in Appendix D also included the EPA's estimate of the baseline total emissions of VOC from industrial cleaning solvent use at these facilities.[8] The EPA estimated that there were 166 facilities in Pennsylvania that would be affected by the recommended CTG control measures, with baseline total emissions of VOC of 3,660 megagrams per year (Mg/yr). The 3,660 Mg/yr converts to 4,034 tpy.

The EPA assumed that the average VOC concentration of high VOC-content solvents is 900 grams of VOC per liter of solvent (g VOC/l). The EPA-recommended VOC emission control limit for an industrial cleaning solvent is a VOC concentration of 50 g VOC/l of industrial cleaning solvent. The use of an industrial cleaning solvent with a VOC content of 50 g VOC/l would be a reduction in VOC emissions of approximately 95% or 95% control efficiency ([(900 g/l – 50 g/l) / 900 g/l] x 100 = 95%).

Using data from the 2002 NEI database, the EPA provides in the 2006 ICS CTG that of the total VOC emissions Nationally from solvent cleaning operations (64,000 Mg/yr; 71,000 tpy), approximately 4,000 Mg/yr (4,400 tpy) were from degreasing operations that use industrial cleaning solvents. The Department regulates the VOC emissions from degreasing operations under existing § 129.63. The remaining 60,000 Mg/yr (66,600 tpy) were from the other industrial solvent cleaning activities that are the subject of proposed § 129.63a. Therefore, of the total VOC emissions from industrial cleaning solvent cleaning operations of 71,000 tpy, approximately 6% of those emissions were from degreasing operations and approximately 94% were from other industrial cleaning solvent cleaning activities.

The EPA estimated that the 166 facilities in Pennsylvania had baseline total emissions of VOC of 3,660 Mg/yr (4,034 tpy). Prorating this amount of emissions to the Department's estimated group of 576 potentially affected facility owners and operators projects total VOC emissions of as much as 13,997 tpy (576 facilities/X tpy = 166 facilities/4,034 tpy) from the group of 576 affected facility owners and operators estimated by the Department using the SBDC EMAP data if the VOC emissions from subject cleaning activities are not already controlled. Of the total projected VOC emissions of 13,997 tpy from the potentially affected group of 576 facility owners and operators, as much as 13,157 tpy (13,997 tpy x 94%) may be from the other industrial cleaning solvent cleaning activities addressed by proposed § 129.63a.

The Department estimated the maximum amount of potential VOC emission reductions that may be generated by implementing the control measures in proposed § 129.63a by using the EPA's control

[8] *Control Techniques Guidelines: Industrial Cleaning Solvents*; EPA 453/R-06-001 September 2006; Appendix D, Number of nonattainment facilities organized by State that are estimated to meet the applicability criteria recommended in the CTG.

efficiency of 95% times the estimated projected amount of total VOC emissions of 13,157 tpy. The estimated amount of VOC emission reductions from the potentially affected 576 facility owners and operators, including small businesses, could be as much as 12,499 tpy (13,157 tpy x 95%). The estimated average amount of potential VOC emission reductions per affected owner and operator could be approximately 22 tpy per affected facility (12,499 tpy/576 facilities). The amount of VOC emission reductions achieved by implementing these control measures could be less depending on the level of compliance already demonstrated by the affected facility owners and operators.

Estimated potential financial impact on affected owners and operators

Using the EPA cost number of $1,453 as the baseline for annual operating costs and the cost range of $1,171 to $1,480 to implement the recommended control measures, the Department calculated that the annual financial impact on potentially affected Pennsylvania facility owners and operators could range from an average savings of $282 per affected facility owner and operator to an average cost of $27 per affected facility owner and operator. Please see the responses to Questions 18 and 19 for additional detail.

Social impact and benefits

The VOC emission control measures in proposed § 129.63a would help ensure that the owners and operators of regulated facilities, farms and agricultural enterprises, hardwoods and timber industries and tourism-related businesses, and employees, residents of labor communities, citizens and the environment of this Commonwealth experience the benefits of improved health and welfare resulting from the implementation of the proposed VOC emission reduction measures to attain and maintain the ozone NAAQS in this Commonwealth. Although proposed § 129.63a is designed primarily to address ground-level ozone air quality, the substitution of no-VOC or low-VOC content cleaning materials for materials with noncomplying VOC contents to meet the VOC content limits applicable to users may also result in other health and environmental benefits. The reduced levels of high VOC-content industrial cleaning solvents would benefit groundwater quality through reduced loading on water treatment plants and in reduced quantities of high VOC-content industrial cleaning solvents leaching into the ground and streams and rivers. The improvements in ground-level ozone air quality and groundwater quality through reduced emissions of VOCs from industrial cleaning solvent operations would provide economic and social benefits through reduced need for medical treatment for asthma and lung-related illnesses and reduced costs for repairing damage to infrastructure, as well as through improved crop yields, healthier forests and wildlife, and increased tourism to see the beautiful natural areas of the Commonwealth.

Economic opportunities

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

Effects of the proposed revisions to §§ 121.1, 129.51, 129.73, 129.96, 129.97, 129.99, and 129.100

The proposed revisions for §§ 121.1, 129.51, 129.73, 129.96, 129.97, 129.99, and 129.100 are clarifying amendments only. These revisions would not change the financial, economic, amount of emission reductions, or social impact of these regulations on affected persons, businesses, small businesses, labor communities, or private or public organizations. The benefits of these proposed revisions would be improved clarity.

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

In addition to the health, environmental, and economic benefits anticipated from implementing the control measures in proposed § 129.63a, proposed § 129.63a is expected to result in an overall cost savings to the regulated community. In the 2006 ICS CTG, the EPA estimates that facilities could face a slight annual increase of about 1.8% in cleaning costs or realize an annual cost savings of about 19% as a result of switching to aqueous parts cleaning. Pechan's cost analysis for the Texas rulemaking updated the savings cited in the 2006 ICS CTG through the use of updated cost factors. The 2010 Pechan report for Texas estimates that small businesses in Texas will save an average of $2,760 annually from adoption of the 2006 ICS CTG recommendations. Please see the response to Question 15 for further explanation.

As discussed in the response to Question 10, the monetized health benefits to Commonwealth residents and the economic benefits to the Commonwealth's agricultural, hardwoods and tourism industries as a result of attaining and maintaining the ground-level 8-hour ozone NAAQS, achieved in part through reduced emissions of ozone precursors from the use of compliant industrial cleaning solvents in the Commonwealth, are considerable in comparison to the costs that would be incurred by the owners and operators of potentially subject facilities to comply with the control measures in proposed § 129.63a. The EPA has estimated the monetized health benefits of attaining the 2008 and 2015 8-hour ozone NAAQS. The EPA estimated that the monetized health benefits of attaining the 2008 8-hour ozone NAAQS of 0.075 ppm range from $8.3 billion to $18 billion on a National basis by 2020.[9] Prorating that benefit to the Commonwealth, based on population, results in a public health benefit of $337 million to $732 million. Similarly, the EPA estimated that the monetized health benefits of attaining the 2015 8-hour ozone NAAQS of 0.070 ppm range from $1.5 billion to $4.5 billion on a National basis by 2025.[10] Prorating that benefit to the Commonwealth, based on population, results in a public health benefit of $63 million to $189 million. The Department is not stating that these estimated monetized health benefits would all be the result of implementing the RACT measures in proposed § 129.63a, but the EPA estimates are indicative of the benefits to Commonwealth residents of attaining the 2008 and 2015 8-hour ozone NAAQS through the implementation of a suite of measures to control VOC emissions in the aggregate from different source categories.

The estimated combined total economic impact for the owners and operators of the 576 potentially affected facilities ranges from annual costs of as low as $15,552 to total annual savings of $162,432. The worst case scenario of $15,552 annual costs for the affected owners and operators is very small in comparison to the potential economic gains in public health and welfare to Commonwealth residents of attaining and maintaining the 8-hour ozone NAAQS. The Department further calculated that the annual financial impact on potentially affected Pennsylvania facility owners and operators, including small businesses, could range

[9] *Regulatory Impact Analysis, Final National Ambient Air Quality Standard for Ozone*, July 2011, http://www.nrc.gov/docs/ML1224/ML12240A237.pdf.

[10] *Regulatory Impact Analysis of the Final Revisions to the National Ambient Air Quality Standards for Ground-Level Ozone*, September 2015, https://www3.epa.gov/ttnecas1/docs/ria/naaqs-o3_ria_final_2015-09.pdf.

from an average annual savings of $282 per affected facility owner and operator to an average annual cost of $27 per affected facility owner and operator.

The Department expects that negative impacts on individuals, small businesses, businesses, and labor communities would be minimal to none. The owner and operator of an affected facility would likely incur savings or, in the worst case scenario, little-to-no cost to implement the requirements in proposed § 129.63a. Industrial cleaning solvents such as Stoddard solvent, mineral spirits, and most other common solvents provided by suppliers have vapor pressures well below the 8 mmHg at 68°F (20°C) limit specified in proposed § 129.63a(e). The owners and operators of potentially affected facilities such as automobile repair garages and metal parts manufacturing facilities, as well as other affected manufacturing facilities already using these materials would not likely need to make any changes to their industrial cleaning solvent materials. The Department expects the regulated industry in this Commonwealth to realize cost savings because low-VOC content industrial cleaning solvent materials are readily available at a cost that is lower than the high-VOC content industrial cleaning solvent materials they replace as a result of similar requirements already in effect in neighboring states.

Effects of the proposed revisions to §§ 121.1, 129.51, 129.73, 129.96, 129.97, 129.99, and 129.100

The proposed revisions for §§ 121.1, 129.51, 129.73, 129.96, 129.97, 129.99, and 129.100 are clarifying amendments only and would not change the financial impact of these sections on affected persons or the regulated community. The benefits of these proposed revisions would be improved clarity, which would not have an adverse effect.

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

The EPA estimates in the 2006 ICS CTG that the owner and operator of an affected facility could face a slight annual increase of as much as 1.8% in cleaning costs or realize an annual cost savings of as much as 19% as a result of switching to aqueous parts cleaning solvents. Pechan's cost analysis for the Texas rulemaking updated the savings cited in the 2006 ICS CTG through the use of updated cost factors. The 2010 Pechan report for Texas estimates that small businesses in Texas would save an average of $2,760 annually from adoption of the 2006 ICS CTG recommendations. The Department expects the regulated industry in this Commonwealth to realize cost savings because low-VOC content industrial cleaning solvent materials are readily available at a cost that is equal to or lower than the high-VOC content industrial cleaning solvent materials they replace as a result of similar requirements already in effect in neighboring states. Please see the response to Question 15 for further explanation.

Using the EPA cost number of $1,453 as the baseline for annual operating costs and the cost range of $1,171 to $1,480 to implement the recommended control measures, the estimated combined total economic impact for the owners and operators of the estimated 576 potentially affected facilities, including small businesses, ranges from annual costs of as low as $15,552 to total annual savings of $162,432. The Department calculated this estimate as follows:

576 facilities x $1,453 = $836,928 baseline costs
576 facilities x $1,171 = $674,496 lower cost solvent replacement
$836,928 – $674,496 = $162,432 total cost savings

576 facilities x $1,453 = $836,928 baseline costs
576 facilities x $1,480 = $852,480 higher cost solvent replacement
$852,480 – $836,928 = $15,552 total costs

The Department further calculated that the annual financial impact on potentially affected Pennsylvania facility owners and operators, including small businesses, could range from an average annual savings of $282 per affected facility owner and operator to an average annual cost of $27 per affected facility owner and operator.

$162,432 / 576 affected facilities = $282 savings per affected facility owner and operator

$15,552 / 576 affected facilities = $27 cost increase per affected facility owner and operator

The cost effectiveness could range from a savings of approximately $12.99 per ton of VOC emissions reduced per year ($162,432 total savings / 12,499 tons of total VOC emissions reduced per year) to a cost of approximately $1.24 per ton of VOC emissions reduced per year ($15,552 costs / 12,499).

The Department anticipates that the impact of proposed § 129.63a on the regulated community would be to generate overall cost savings of as much as $162,432 per year or an average of approximately $282 savings per affected facility owner and operator, including small businesses. The savings could be greater, considering the updated cost savings cited in the 2010 Pechan Texas report of $2,760 per affected small business. If there are increased costs, the Department estimates that the increase would likely not be more than $15,552 per year and the corresponding impact on an individual affected facility owner and operator would be minimal, with an estimated average impact of $27 per affected facility owner and operator, including small businesses. Industrial cleaning solvents such as Stoddard solvent, mineral spirits, and most other common solvents provided by suppliers have vapor pressures well below the 8 mmHg at 68°F (20°C) limit specified in proposed § 129.63a(e). The owners and operators of potentially affected facilities such as automobile repair garages, metal parts manufacturing facilities, and other affected manufacturing facilities using these materials would not likely have to make any changes to their industrial cleaning solvent materials.

If an owner or operator of a facility were to elect to comply by installing and operating a VOC emissions capture system and add-on air pollution control device, the owner or operator would likely experience costs. It is unlikely, however, that an owner or operator would choose this option, given the wide availability of low cost compliant VOC-content industrial cleaning solvent materials.

No new legal, accounting or consulting procedures are contained in proposed § 129.63a.

Effects of the proposed revisions to §§ 121.1, 129.51, 129.73, 129.96, 129.97, 129.99, and 129.100

The proposed revisions for §§ 121.1, 129.51, 129.73, 129.96, 129.97, 129.99, and 129.100 are clarifying amendments only. These revisions would not change the financial impact of these sections on the regulated community.

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

Costs and/or savings to local governments would be the same as, or similar to, those described in response to Question 19. Please also see the responses to Questions 15 and 17 for further explanation.

Effects of the proposed revisions to §§ 121.1, 129.51, 129.73, 129.96, 129.97, 129.99, and 129.100

The proposed revisions for §§ 121.1, 129.51, 129.73, 129.96, 129.97, 129.99, and 129.100 are clarifying amendments only. These revisions would not change the financial impact of these sections on local governments.

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

Costs and/or savings to state governments would be the same as, or similar to, those described in response to Question 19. Please also see the responses to Questions 15 and 17 for further explanation.

Effects of the proposed revisions to §§ 121.1, 129.51, 129.73, 129.96, 129.97, 129.99, and 129.100

The proposed revisions for §§ 121.1, 129.51, 129.73, 129.96, 129.97, 129.99, and 129.100 are clarifying amendments only. These revisions would not change the financial impact of these sections on affected state government entities.

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

(22a) Are forms required for implementation of the regulation?

No new legal, accounting or consulting procedures are contained in proposed § 129.63a for entities listed in (19)-(21) above. No new forms would be required by proposed § 129.63a. The measures for the control of VOC emissions from industrial cleaning solvents in proposed § 129.63a would establish monthly recordkeeping requirements for the owners and operators of affected facilities. Recordkeeping costs should be minimal however, as the affected facility owners and operators could use typical industry records such as monthly purchase records and material safety data sheets (MSDS) as part of the documentation to demonstrate compliance.

Effects of the proposed revisions to §§ 121.1, 129.51, 129.73, 129.96, 129.97, 129.99, and 129.100

The proposed revisions for §§ 121.1, 129.51, 129.73, 129.96, 129.97, 129.99, and 129.100 are clarifying amendments only. These revisions would likely not change the legal, accounting, consulting, or recordkeeping and reporting impact of these sections on the entities listed in questions 19–21.

(22b) If forms are required for implementation of the regulation, **attach copies of the forms here.** If your agency uses electronic forms, provide links to each form or a detailed description of the information required to be reported. **Failure to attach forms, provide links, or provide a detailed description of the information to be reported will constitute a faulty delivery of the regulation.**

N/A because no forms are required for the implementation of the proposed rulemaking.

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

	Current FY Year 16/17	FY+1 Year 17/18	FY+2 Year 18/19	FY+3 Year 19/120	FY+4 Year 120/21	FY+5 Year 21/22
SAVINGS:	**$**	**$**	**$**	**$**	**$**	**$**
Regulated Community	0.00	0.00	81,216.00	162,432.00	162,432.00	162,432.00
Local Government	0.00	0.00	0.00	0.00	0.00	0.00
State Government	0.00	0.00	0.00	0.00	0.00	0.00
Total Savings	0.00	0.00	81,216.00	162,432.00	162,432.00	162,432.00
COSTS:	**$**	**$**	**$**	**$**	**$**	**$**
Regulated Community	0.00	0.00	7,776.00	15,552.00	15,552.00	15,552.00
Local Government	0.00	0.00	0.00	0.00	0.00	0.00
State Government	0.00	0.00	0.00	0.00	0.00	0.00
Total Costs	0.00	0.00	7,776.00	15,552.00	15,552.00	15,552.00
REVENUE LOSSES:	**$**	**$**	**$**	**$**	**$**	**$**
Regulated Community	0.00	0.00	0.00	0.00	0.00	0.00
Local Government	0.00	0.00	0.00	0.00	0.00	0.00
State Government	0.00	0.00	0.00	0.00	0.00	0.00
Total Revenue Losses	0.00	0.00	0.00	0.00	0.00	0.00

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

Program	FY-3 (13/14)	FY-2 (14/15)	FY-1 (15/16)	Current FY (16/17)
Environmental Program Management (161-10382)	$25,733,000	$28,517,000	$28,277,000	$30,025,000
Clean Air Fund Major Emission Facilities (215-20077)	$18,413,000	$16,870,000	$17,373,000	$21,050,000
Clean Air Fund Mobile and Area Facilities (233-20084)	$8,036,000	$9,811,000	$10,142,000	$11,454,000

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

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

The Department anticipates that the owners and operators of as many as 576 facilities across the Commonwealth could be subject to the proposed measures to control VOC emissions from industrial cleaning solvent cleaning activities. Of these potentially subject facility owners and operators, as many as 253 may meet the definition of small business (as defined in Section 3 of the Regulatory Review Act, 71 P.S. § 745.3). Please see the response to Question 15 for a detailed explanation of how the Department estimated these numbers. As noted in the response to Question 15, it is also possible that far fewer would be subject to the requirements of proposed § 129.63a.

The proposed revisions for §§ 121.1, 129.51, 129.73, 129.96, 129.97, 129.99, and 129.100 are clarifying amendments only. These revisions would not change the types or numbers of small businesses required to comply with these regulations.

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

Reporting, recordkeeping, and administrative costs relating to implementation of the proposed measures to control VOC emissions from industrial cleaning solvent cleaning activities would be minimal. The owners and operators of affected facilities that use common VOC-compliant cleaning solvents and maintain monthly purchase records along with MSDS sheets would likely not incur additional costs to meet the reporting, recordkeeping, and administrative requirements of proposed § 129.63a. The professional skills required to keep the necessary records would be the same as the skills the facility owner and operator requires when keeping normal business records.

The proposed revisions for §§ 121.1, 129.51, 129.73, 129.96, 129.97, 129.99, and 129.100 are clarifying amendments only. These revisions would likely not impact the reporting, recordkeeping, or administrative costs incurred by those entities required to comply with these regulations.

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

The Department expects that the impact on small businesses would be minimal. The owner and operator of a facility that would be subject to the proposed measures to control VOC emissions from industrial cleaning solvent cleaning activities would likely incur little, if any, cost to implement the applicable requirements. Industrial cleaning solvents such as Stoddard solvent, mineral spirits, and most other common solvent products have vapor pressures well below the 8 mmHg at 68°F (20°C) limit specified in proposed § 129.63a(e). The owners and operators of potentially affected facilities such as automobile repair garages and metal parts manufacturing facilities using these materials would not likely have to make any changes to their industrial cleaning solvent materials. In the 2006 ICS CTG, the EPA estimates that affected facility owners and operators could face a slight annual increase of about 1.8% in cleaning costs or realize an annual cost savings of about 19% as a result of switching to aqueous parts cleaning solvents. Pechan's cost analysis for the Texas rulemaking updated the savings cited in the 2006 ICS CTG through the use of updated cost factors. The 2010 Pechan report for Texas estimates that small businesses in Texas will save an average of $2,760 annually from adoption of the 2006 ICS CTG recommendations. The Department expects the regulated industry in this Commonwealth to likewise realize cost savings because low-VOC content industrial cleaning solvent materials are readily available at a cost that is likely equal to or lower than the high-VOC content industrial cleaning solvent materials they replace as a result of similar requirements already in effect in neighboring states. Please see the response to Question 15 for additional information.

Proposed § 129.63a allows the use of a VOC emissions capture system and add-on air pollution control device as an additional compliance option. If an owner or operator of a facility were to elect to comply by installing and operating a VOC emissions capture system and add-on air pollution control device, the owner or operator would likely experience costs. It is unlikely that an owner or operator would choose this option however, given the wide availability of low-cost compliant VOC-content materials.

The proposed revisions for §§ 121.1, 129.51, 129.73, 129.96, 129.97, 129.99, and 129.100 are clarifying amendments only. These revisions would likely have no impact on those small businesses required to comply with these regulations.

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

No alternative regulatory provisions are available. Proposed § 129.63a includes flexibility for compliance, but the proposed measures for control of VOC emissions from industrial cleaning solvent cleaning activities must satisfy the Federal CAA requirements. Adopting RACT regulations is a Federal CAA requirement. The emission control requirements of the RACT regulations must apply to the owners and operators of all subject sources that meet the applicable VOC emission thresholds regardless of business size. In accordance with sections 172(c)(1), 182(b)(2)(A) and 184(b)(1)(B) of the CAA, proposed § 129.63a would establish VOC emission limitations and other requirements consistent with the recommendations of the EPA 2006 ICS CTG as RACT for these sources in this Commonwealth. See *Consumer and Commercial Products, Group II: Control Techniques Guidelines in Lieu of Regulations for Flexible Packaging Printing Materials, Lithographic Printing Materials, Letterpress Printing Materials, Industrial Cleaning Solvents, and Flat Wood Panel Coatings,* 71 FR 58745 (October 5, 2006).

The proposed revisions for §§ 121.1, 129.51, 129.73, 129.96, 129.97, 129.99, and 129.100 are clarifying amendments only. These revisions would likely have no impact on those entities required to comply with these regulations.

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

The Department expects that the impact on minorities, the elderly, small businesses, and farmers would be minimal. Minorities, the elderly, small businesses, and farmers who are not owners or operators of an industrial cleaning solvent cleaning unit operation subject to proposed § 129.63a would not be affected by the proposed rulemaking. For those that are owners or operators of a subject industrial cleaning solvent cleaning unit operation, no special provisions are necessary. Reporting, recordkeeping, and administrative costs relating to implementation of the proposed measures to control VOC emissions from industrial cleaning solvent cleaning activities would be minimal.

The owner and operator of a facility that would be subject to the proposed measures to control VOC emissions from industrial cleaning solvent cleaning activities would likely incur little, if any, cost to implement the applicable requirements. Industrial cleaning solvents such as Stoddard solvent, mineral spirits and most other common solvents products have vapor pressures well below the 8 mmHg at 68°F (20°C) limit specified in proposed § 129.63a(e). The owners and operators of potentially affected facilities such as automobile repair garages and metal parts manufacturing facilities using these materials would likely not have to make any changes to their industrial cleaning solvent materials or recordkeeping procedures.

The proposed revisions for §§ 121.1, 129.51, 129.73, 129.96, 129.97, 129.99, and 129.100 are clarifying amendments only. Special provisions to implement these revisions are not needed.

(26) Include a description of any alternative regulatory provisions which have been considered and rejected and a statement that the least burdensome acceptable alternative has been selected.

The proposed measures to control VOC emissions from industrial cleaning solvent cleaning activities is considered the least burdensome acceptable method of ensuring compliance with the Federal RACT mandate. In accordance with sections 172(c)(1), 182(b)(2)(A) and 184(b)(1)(B) of the CAA, proposed § 129.63a would establish VOC emission limitations and other requirements generally consistent with the recommendations of the EPA 2006 ICS CTG as RACT for these sources in this Commonwealth. See *Consumer and Commercial Products, Group II: Control Techniques Guidelines in Lieu of Regulations for Flexible Packaging Printing Materials, Lithographic Printing Materials, Letterpress Printing Materials, Industrial Cleaning Solvents, and Flat Wood Panel Coatings,* 71 FR 58745 (October 5, 2006).

The proposed revisions for §§ 121.1, 129.51, 129.73, 129.96, 129.97, 129.99, and 129.100 are clarifying amendments only. These revisions should improve the understanding for the regulated community and other impacted entities. Alternative regulatory provisions for these revisions were not considered.

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

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

Less stringent compliance requirements are not available for small businesses. The Department included flexibilities in proposed § 129.63a, but the proposed measures to control VOC emissions from industrial cleaning solvent activities must satisfy the Federal CAA requirements. Adopting RACT regulations is a Federal CAA requirement. The proposed VOC emission control measures must apply to the owners and operators of all subject sources that emit VOC emissions from the covered industrial cleaning solvent cleaning activities at or above the threshold of total combined actual 2.7 tons of VOC emissions per 12-month rolling period, regardless of business size. In accordance with sections 172(c)(1), 182(b)(2)(A) and 184(b)(1)(B) of the CAA, proposed § 129.63a would satisfy RACT requirements for owners and operators engaging in these industrial cleaning solvent cleaning activities by establishing VOC emission limitations and other requirements generally consistent with the recommendations in the EPA 2006 ICS CTG. See *Consumer and Commercial Products, Group II: Control Techniques Guidelines in Lieu of Regulations for Flexible Packaging Printing Materials, Lithographic Printing Materials, Letterpress Printing Materials, Industrial Cleaning Solvents, and Flat Wood Panel Coatings,* 71 FR 58745 (October 5, 2006)

The proposed revisions for §§ 121.1, 129.51, 129.73, 129.96, 129.97, 129.99, and 129.100 are clarifying amendments only. These revisions would not impact compliance or reporting requirements for small businesses subject to these regulations.

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

Minimal adverse impact is expected for the owners and operators of small business-sized facilities to implement the proposed measures to control VOC emissions from industrial cleaning solvent cleaning activities. As explained in the response to Question 9, proposed § 129.63a is overdue to the EPA for approval as a SIP revision. Further delay of implementation would not be feasible. The Commonwealth's proposed rulemaking process provides ample time for the owners and operators of facilities that might be subject to proposed § 129.63a to prepare to comply as soon as proposed § 129.63a is published in the *Pennsylvania Bulletin* as a final-form regulation. Additionally, many potentially impacted entities may already be complying with the proposed requirements, as compliant VOC-content industrial cleaning solvent materials are readily available at a cost that is likely equal to or lower than the high-VOC content industrial cleaning solvent materials they replace as a result of similar requirements already in effect in neighboring states. These entities would have no adverse impact from the proposed requirements for controlling VOC emissions from industrial cleaning solvent activities.

The proposed revisions for §§ 121.1, 129.51, 129.73, 129.96, 129.97, 129.99, and 129.100 are clarifying amendments only. These revisions would not impact compliance schedules or deadlines for small businesses subject to these regulations.

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

Minimal adverse impact is expected for the owners and operators of small business-sized facilities to implement the proposed measures to control VOC emissions from industrial cleaning solvent cleaning activities. The compliance options in proposed § 129.63a should allow the owners and operators of small

business-sized facilities to find an acceptable method of compliance appropriate to their operation. Reporting would only be necessary under proposed § 129.63a if requested in writing by the Department.

The proposed revisions for §§ 121.1, 129.51, 129.73, 129.96, 129.97, 129.99, and 129.100 are clarifying amendments only. These revisions would not require the consolidation or simplification of compliance or reporting requirements for small businesses subject to these regulations.

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

The proposed measures to control VOC emissions from industrial cleaning solvent cleaning activities include performance standards. If an owner or operator of a subject industrial cleaning solvent cleaning unit operation, including a small business-sized facility, chooses not to comply solely by using complying VOC-content industrial cleaning solvents, the owner or operator could achieve equivalent compliance through the use of a VOC emissions capture system and an add-on air pollution control device. If the owner or operator is not able to comply with either of these options, the owner or operator may also meet the emission limitations through an alternative method under the proposed amendment of § 129.51(a).

The proposed revisions for §§ 121.1, 129.51, 129.73, 129.96, 129.97, 129.99, and 129.100 are clarifying amendments only. These revisions would not require the establishment of performance standards to replace design or operational standards for small businesses subject to these regulations.

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

Adopting RACT regulations is a Federal CAA requirement. The VOC emission control measures in proposed § 129.63a must apply Statewide to the owners and operators of *all* facilities at which the total combined actual VOC emissions from all subject industrial cleaning solvent cleaning activities at the facility are equal to or greater than the threshold of 2.7 tons (2,455 kilograms) of VOC emissions per 12-month rolling period, before consideration of controls, regardless of business size. A facility may be classified as a small business under the Federal Small Business Size Regulations under 13 CFR Chapter 1, Part 121, while still emitting sufficient emissions of VOC to subject the owner and operator to regulations designed to implement measures for the control of those VOC emissions.

The proposed revisions for §§ 121.1, 129.51, 129.73, 129.96, 129.97, 129.99, and 129.100 are clarifying amendments only. Small businesses subject to these regulations would not be exempted from the implementation of these revisions.

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

The Department reviewed the information provided by the EPA in the 2006 ICS CTG for establishing RACT for the industrial cleaning solvent activities that would be regulated by the proposed measures to control VOC emissions from these covered activities. The Department believes that the data used by the EPA to develop the RACT recommendations meet the acceptability standard for empirical, replicable and testable data. Additionally, according to the EPA's Scientific Integrity Policy, the EPA adheres to the 2002

Office of Management and Budget (OMB) Information Quality Guidelines, the 2005 OMB Information Quality Bulletin for Peer Review, the EPA's Quality Policy (CIO 2106) for assuring the collection and use of sound scientific data and information, the EPA's Peer Review Handbook for internal and external review of scientific products, and the EPA's Information Quality Guidelines for establishing the transparency, integrity and utility of information published on the Agency's websites.[11]

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

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

Consumer and Commercial Products, Group II: Control Techniques Guidelines in Lieu of Regulations for Flexible Packaging Printing Materials, Lithographic Printing Materials, Letterpress Printing Materials, Industrial Cleaning Solvents, and Flat Wood Panel Coatings, 71 FR 58745 (October 5, 2006).

Control Techniques Guidelines: Industrial Cleaning Solvents, EPA 453/R-06-001, Office of Air Quality Planning and Standards, EPA, September 2006. The 2006 ICS CTG is available on the EPA website at: https://www.epa.gov/stationary-sources-air-pollution/clean-air-act-guidelines-and-standards-solvent-use-and-surface.

Industrial Cleaning Solvents and Adhesives, Inventory Research, Final Report, Texas Commission on Environmental Quality (TCEQ), Austin, TX 78711, TCEQ Grant Agreement No. 582-7-84007, Work Order No. 582-7-84007-FY10-03, Tracking No. 2010-41, July 2010, prepared by Dr. Jonathan G. Dorn, E.H. Pechan & Associates, Inc., 3622 Lyckan Parkway, Suite 2005, Durham, NC 27707. The report is available on the TCEQ website at: http://www.tceq.texas.gov/assets/public/implementation/air/rules/contracts/2010-cleaning-adhesives-final.pdf.

Pennsylvania Department of Agriculture:

Pennsylvania Department of Agriculture, 2016, About PDA, http://www.agriculture.pa.gov/Pages/About-PDA.aspx; and Fast Facts on Agriculture and Food Careers in Pennsylvania, December 10, 2015, http://www.agriculture.pa.gov/Encourage/Documents/Fast%20Facts%20on%20Agriculture%20and%20Food%20Careers%20in%20Pennsylvania%20(revised).pdf.

Pennsylvania Hardwoods Development Council, Biennial Report, 2009-2010. A copy of this report is available from DEP Bureau of Air Quality upon request.

[11] United States Environmental Protection Agency, Scientific Integrity Policy, http://www.epa.gov/osa/pdfs/epa_scientific_integrity_policy_20120115.pdf, page 1.

Pennsylvania Department of Conservation and Natural Resources:

Pennsylvania Department of Conservation and Natural Resources, 2016, DCNR Bureau of Forestry, Our Mission and What We Do, http://www.dcnr.state.pa.us/cs/groups/public/documents/document/dcnr_010470.pdf.

Pennsylvania Department of Conservation and Natural Resources, Bureau of Forestry, 2016 State Forest Resource Management Plan, page 20. http://www.dcnr.state.pa.us/forestry/stateforestmanagement/sfrmp/2016sfrmp/index.htm

Regulatory Impact Analysis, Final National Ambient Air Quality Standard for Ozone, July 2011, U.S. Environmental Protection Agency, Office of Air and Radiation, Office of Air Quality Planning and Standards, Research Triangle Park, NC, 27711, http://www.nrc.gov/docs/ML1224/ML12240A237.pdf.

Regulatory Impact Analysis of the Final Revisions to the National Ambient Air Quality Standards for Ground-Level Ozone, September 2015, U.S. Environmental Protection Agency, Office of Air and Radiation, Office of Air Quality Planning and Standards, Research Triangle Park, NC 27711, https://www3.epa.gov/ttnecas1/docs/ria/naaqs-o3_ria_final_2015-09.pdf.

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).

The proposed revisions for §§ 121.1, 129.51, 129.73, 129.96, 129.97, 129.99, and 129.100 are clarifying amendments only. No data was needed to develop these revisions.

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

A. The length of the public comment period:	64 days
B. The date or dates on which public meetings or hearings will be held:	July 18,19,20, 2017
C. The expected date of delivery of the final-form regulation:	1st Quarter 2018
D. The expected effective date of the final-form regulation:	Date of publication
E. The expected date by which compliance with the final-form regulation will be required:	Date of publication
F. The expected date by which required permits, licenses or other approvals must be obtained:	NA

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

The Board is not establishing a sunset date for this proposed regulation, since it is needed for the Department to carry out its statutory authority. The Department will closely monitor this proposed regulation after promulgation as a final-form regulation for its effectiveness and recommend updates to the Board as necessary.

CDL-1

FACE SHEET
FOR FILING DOCUMENTS
WITH THE LEGISLATIVE REFERENCE BUREAU

(Pursuant to Commonwealth Documents Law)

DO NOT WRITE IN THIS SPACE

Copy below is hereby approved as to form and legality.
Attorney General

By: Amy M. Elliott
(Deputy Attorney General)

MAY 22 2017
DATE OF APPROVAL

☐ Check if applicable
Copy not approved. Objections attached.

Copy below is hereby certified to be true and correct copy of a document issued, prescribed or promulgated by:

DEPARTMENT OF ENVIRONMENTAL PROTECTION
ENVIRONMENTAL QUALITY BOARD

(AGENCY)

DOCUMENT/FISCAL NOTE NO. 7-492

DATE OF ADOPTION MARCH 21, 2017

BY Patrick M. McDonnell

TITLE PATRICK MCDONNELL
ACTING CHAIRMAN

EXECUTIVE OFFICER CHAIRMAN OR SECRETARY

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

BY J. Lavelle
APR 24 2017
DATE OF APPROVAL

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

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

NOTICE OF PROPOSED RULEMAKING

DEPARTMENT OF ENVIRONMENTAL PROTECTION
ENVIRONMENTAL QUALITY BOARD

Control of VOC Emissions from Industrial Cleaning Solvents; General Provisions; Aerospace Manufacturing and Rework; and Additional RACT Requirements for Major Sources of NO_x and VOCs

25 Pa. Code, Chapters 121 and 129

PROPOSED RULEMAKING
ENVIRONMENTAL QUALITY BOARD
[25 PA. CODE CHS. 121 AND 129]
Control of VOC Emissions from Industrial Cleaning Solvents; General Provisions; Aerospace Manufacturing and Rework; and Additional RACT Requirements for Major Sources of NO_x and VOCs

The Environmental Quality Board (Board) proposes to amend Chapters 121 and 129 (relating to general provisions; and standards for sources) to read as set forth in Annex A. This proposed rulemaking would amend Chapter 129 to add § 129.63a (relating to control of VOC emissions from industrial cleaning solvents) to adopt reasonably available control technology (RACT) requirements and RACT emission limitations for stationary sources of volatile organic compound (VOC) emissions from industrial cleaning solvents that are not regulated elsewhere in Chapter 129 or 25 Pa. Code Chapter 130 (relating to standards for products). This proposed rulemaking would also amend §§ 121.1 and 129.51 (relating to definitions; and general) to support the addition of § 129.63a; § 129.73 (relating to aerospace manufacturing and rework) to correct a numbering error in the table of VOC content limits; and §§ 129.96, 129.97, 129.99 and 129.100 under the recently promulgated regulations for additional RACT requirements for major sources of nitrogen oxides (NO_x) and VOCs (RACT 2) to update the list of presumptive VOC RACT regulations for which RACT 2 does not apply and to clarify certain requirements.

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

This notice is given under Board order at its meeting of March 21, 2017.

A. *Effective Date*

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

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. Information regarding submitting comments on this proposed rulemaking appears in Section J of this preamble. Persons with a disability may use the Pennsylvania AT&T Relay Service, (800) 654-5984 (TDD users) or (800) 654-5988 (voice users). This proposed rulemaking is available on the Department of Environmental Protection's (Department) web site at www.dep.pa.gov (select "Public Participation," then "Environmental Quality Board").

C. *Statutory Authority*

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

D. *Background and Purpose*

Proposed § 129.63a would implement control measures to reduce VOC emissions from industrial cleaning solvents used and applied during cleaning unit operations at facilities which are not regulated elsewhere in Chapter 129 or Chapter 130. Industrial cleaning solvents are used or applied in a cleaning activity to remove a contaminant, including an adhesive, ink, paint, dirt, soil, oil or grease, from a cleaning unit operation or work production-related work area or from a part, product, tool, machinery, equipment, vessel, floor or wall.

VOCs are precursors for ground-level ozone formation. Ground-level ozone, a public health and welfare hazard, is not emitted directly to the atmosphere by industrial cleaning solvents, but forms from the photochemical reaction between emissions of VOCs and 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)), proposed § 129.63a establishes VOC emission limitations and other requirements consistent with the recommendations of the EPA 2006 Industrial Cleaning Solvents (ICS) Control Techniques Guidelines (CTG) (2006 ICS CTG) for these sources in this Commonwealth. See Consumer and Commercial Products, Group II: Control Techniques Guidelines in Lieu of Regulations for Flexible Packaging Printing Materials, Lithographic Printing Materials, Letterpress Printing Materials, Industrial Cleaning Solvents, and Flat Wood Paneling Coatings, 71 FR 58745 (October 5, 2006); and Control Techniques Guidelines: Industrial Cleaning Solvents, EPA 453/R-06-001, Office of Air Quality Planning and Standards, EPA, September 2006.

The EPA is responsible for establishing National Ambient Air Quality Standards (NAAQS) for six criteria pollutants considered harmful to public health and the environment: ground-level ozone, particulate matter, NO_x, carbon monoxide, sulfur dioxide and lead. Section 109 of the CAA (42 U.S.C.A. § 7409) established two types of NAAQS: primary standards, which are 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 affect animals in ways similar to humans. High concentrations of ground-level ozone can also cause damage to buildings and synthetic fibers, including nylon, and reduced visibility on roadways and in natural areas. The implementation of additional measures to address ozone air quality nonattainment in this Commonwealth is necessary to protect the public health and welfare, animal and plant health and welfare, and the environment.

In July 1997, the EPA promulgated primary and secondary ozone standards at a level of 0.08 part per million (ppm) averaged over 8 hours. See 62 FR 38856 (July 18, 1997). Because ozone data is measured out to three decimal places, the standard effectively became 0.084 ppm because of rounding; areas with ozone levels as high as 0.084 ppm (84 parts per billion (ppb)) were considered as meeting the 0.08 ppm standard. In 2004, the EPA designated 37 counties in this Commonwealth as 8-hour ozone nonattainment areas for the 1997 8-hour ozone NAAQS. See 69 FR 23858, 23931 (April 30, 2004). Based on the certified ambient air monitoring data for the 2015 ozone season as well as the preliminary 2016 ozone season data, all monitored areas of the Commonwealth are attaining the 1997 8-hour ozone NAAQS. Maintenance plans have been submitted to the EPA and approved for the 1997 ozone standard. In accordance with section 175A(a) of the CAA (42 U.S.C.A. § 7505a(a)), 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 standard for another 10 years following the expiration of the initial 10-year period. See section 175A(b) of the CAA (42 U.S.C.A. § 7505a(b)).

In March 2008, the EPA lowered the primary and secondary ozone NAAQS to 0.075 ppm (75 ppb) averaged over 8 hours to provide greater protection for children, other at-risk populations and the environment against the array of ozone-induced adverse health and welfare effects. See 73 FR 16436 (March 27, 2008). In April 2012, the EPA designated five areas in this Commonwealth as nonattainment for the 2008 ozone NAAQS. See 77 FR 30088, 30143 (May 21, 2012). These areas include all or a portion of Allegheny, Armstrong, Beaver, Berks, Bucks, Butler, Carbon, Chester, Delaware, Fayette, Lancaster, Lehigh, Montgomery, Northampton, Philadelphia, Washington and Westmoreland Counties. With regard to the 2008 ozone NAAQS, the certified 2015 ambient air ozone season monitoring data indicate that all areas of this Commonwealth are monitoring attainment of the 2008 ozone NAAQS. The Department's analysis of the preliminary 2016 ambient air ozone season monitoring data shows that all ozone samplers in this Commonwealth, except the Bristol sampler in Philadelphia County, are monitoring attainment of the 2008 ozone NAAQS. As with the 1997 ozone NAAQS, the Department must ensure that the 2008 ozone NAAQS is 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 violating monitors in New Jersey and Maryland. Adoption of the VOC emission control measures in proposed § 129.63a would allow the

Commonwealth to continue its progress in attaining and maintaining the 2008 8-hour ozone NAAQS.

On October 1, 2015, the EPA again lowered the primary and secondary ozone NAAQS, this time to 70 ppb averaged over 8 hours. See 80 FR 65292 (October 26, 2015). Based on certified 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 monitors are located in Allegheny, Armstrong, Bucks, Delaware, Indiana, Lebanon, Montgomery and Philadelphia Counties. Preliminary ambient air ozone monitoring data for the 2014-2016 ozone seasons, however, indicate that six counties have design values that violate the 2015 ozone NAAQS. These six monitors are located in Allegheny, Berks, Bucks, Delaware, Montgomery and Philadelphia Counties. As required under section 107(d) of the CAA (42 U.S.C.A. § 7407), the Commonwealth submitted designation recommendations for the 2015 ozone NAAQS to the EPA on October 3, 2016. The designation recommendations were based on the ambient ozone concentrations from the 2013-2015 ozone seasons. The EPA is expected to issue final designations for attainment, nonattainment and unclassifiable areas for the 2015 ozone NAAQS 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 the use and application of industrial cleaning solvents during cleaning unit operations at facilities, will assist the Commonwealth in making substantial progress in achieving and maintaining the 1997 and 2008 8-hour ozone NAAQS. These emission reductions will also be necessary for progress in attaining and maintaining the new ozone NAAQS promulgated by the EPA in October 2015.

Proposed § 129.63a is designed to adopt VOC emission limitations and other requirements consistent with the RACT recommendations in the EPA's 2006 ICS CTG to meet the requirements of sections 172(c)(1), 182(b)(2) and 184(b)(1)(B) of the CAA. These VOC emission limitations and other requirements would apply across this Commonwealth as required under section 184(b)(1)(B) of the CAA. The proposed control measures in § 129.63a would reduce VOC emissions from the industrial cleaning solvents source category throughout this Commonwealth at those affected sources that do not already comply with the applicable control measures. The VOC emission reduction measures in proposed § 129.63a are reasonably necessary to attain and maintain the health-based and welfare-based 8-hour ozone NAAQS in this Commonwealth and to satisfy related CAA requirements.

There are no Federal statutory or regulatory RACT limits for VOC emissions from industrial cleaning solvents used or applied during cleaning unit operations at facilities. When developing the recommendations for the VOC emission reduction RACT measures included in its 2006 ICS CTG, the EPA took into account the data collected during the development of the 1994 Alternative Control Techniques (ACT) Document-Industrial Cleaning Solvents. See 2006 ICS CTG, Appendix A (Alternative Control Techniques Document-Industrial Cleaning Solvents, EPA-453/R-94-015 February 1994).

State regulations to control VOC emissions from existing stationary sources of industrial cleaning solvents used or applied during cleaning unit operations at facilities are required under Federal law. The Commonwealth regulation will be reviewed and 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 71 FR 58745. 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 this Commonwealth, submit a SIP revision requiring implementation of RACT for all sources of VOC emissions in the state covered by a specific CTG and not just for those sources that are located in designated nonattainment areas of the state. Consequently, the Commonwealth's SIP must include regulations applicable Statewide to control VOC emissions from existing stationary sources of industrial cleaning solvents used or applied during cleaning unit operations at facilities that are not regulated elsewhere in Chapter 129 or Chapter 130. The ground-level ozone reduction measures included in proposed § 129.63a would achieve VOC emission reductions and lowered concentrations of ground-level ozone locally and would also reduce the amounts of VOC emissions and ground-level ozone transported to downwind states. Adoption of VOC emission reduction requirements for these sources is part of the Commonwealth's strategy, in concert with other OTR jurisdictions, to further reduce the transport of VOC ozone precursors and ground-level ozone throughout the OTR to attain and maintain the 8-hour ozone NAAQS.

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 recommendations of the CTG, when implemented by the affected states, will be "substantially as effective as regulations" in reducing emissions of VOC in ozone nonattainment areas. In 1995, the EPA listed industrial cleaning solvents on its section 183(e) list and, in 2006, issued a CTG for this product category. See 60 FR 15264, 15267 (March 23, 1995); 71 FR 58745; and Control Techniques Guidelines: Industrial Cleaning Solvents, EPA 453/R-06-001, Office of Air Quality Planning and Standards, EPA, September 2006. The 2006 ICS CTG is available on the EPA

web site at: https://www.epa.gov/stationary-sources-air-pollution/clean-air-act-guidelines-and-standards-solvent-use-and-surface.

In the 2006 notice of final determination and availability of final CTGs, the EPA determined that the recommendations of the 2006 ICS CTG would be substantially as effective as National regulations in reducing VOC emissions from the industrial cleaning solvents product category in ozone nonattainment areas. See 71 FR 58745. The CTG provides states with the EPA's recommendation of what constitutes RACT for the covered category. State air pollution control agencies 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 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's Bureau of Air Quality reviewed the RACT recommendations regarding VOC emission reduction measures included in the 2006 ICS 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 and other requirements generally consistent with the recommendations provided in the 2006 ICS CTG are appropriate to be implemented in this Commonwealth as RACT for this source category.

The types of persons, businesses, small businesses and organizations that would be affected by proposed § 129.63a vary. The 2006 ICS CTG states that the recommendations apply to industries that have to use organic solvent to conduct cleaning activities in cleaning unit operations such as mixing vessels (tanks), spray booths and parts cleaners. The cleaning activities for the removal of foreign material from the substrate being cleaned include actions (activities) such as wiping, flushing or spraying. Proposed § 129.63a would apply to the owner and the operator of a facility at which an industrial cleaning solvent is used or applied in a cleaning activity to remove a contaminant, including an adhesive, ink, paint, dirt, soil, oil or grease, from a cleaning unit operation production-related work area or from a part, product, tool, machinery, equipment, vessel, floor or wall, except as specified in § 129.63a(c), which lists exceptions and exemptions. A cleaning unit operation is an operation at a facility that is a source of VOC emissions from a cleaning activity. A cleaning activity is the use or application of an industrial cleaning solvent formulated with one or more regulated VOCs to remove a contaminant from a substrate or from equipment used to apply a material. Cleaning unit operations covered by proposed § 129.63a would include cleaning activities such as spray gun cleaning, spray booth cleaning, large manufactured components cleaning, parts cleaning, equipment cleaning, line cleaning, floor cleaning, tank cleaning and small manufactured components cleaning. Cleaning unit operations under § 129.63a would not include VOC emissions from the use or application of consumer products subject to §§ 130.201—130.471 (relating to Subchapter B, consumer products), including an institutional product or industrial and institutional (I&I) product as defined in § 130.202 (relating to definitions) for cleaning offices, bathrooms or other areas that are not part of a cleaning unit operation or work production-related work area.

Proposed § 129.63a would not apply to the owner and operator of a cleaning unit operation associated with certain categories specified under exceptions and exemptions in proposed

subsection (c). Subsection (c)(1) specifies industry sectors and product categories that would be exempt from proposed § 129.63a. Subsection (c)(2) specifies that the proposed VOC emission limitations of subsection (e) would not apply to the use or application of a noncomplying industrial cleaning solvent by the owner or operator of a cleaning unit operation at a facility subject to subsection (a) under certain circumstances: if the use or application of the noncomplying industrial cleaning solvent is subject to a standard or specification required by the United States Department of Defense, Federal Aviation Administration or other Federal government entity or if the use or application of the noncomplying industrial cleaning solvent is associated with the cleaning of screen printing equipment and the industrial cleaning solvent used or applied has an as applied VOC content that does not exceed 4.2 pounds of VOC per gallon (lb VOC/gal) (500 grams of VOC per liter (g VOC/l)). An owner or operator claiming one of these exemptions would be subject to specified recordkeeping and reporting requirements.

Subsection (c)(3) specifies that the VOC emission limitations of subsection (e) and the work practice requirements of subsection (f) would not apply to the owner or operator of a facility subject to subsection (a) if the total combined actual VOC emissions from all subject cleaning unit operations at the facility are less than 2.7 tons (2,455 kilograms) per 12-month rolling period, before consideration of controls. An owner or operator claiming this exemption would be subject to specified recordkeeping and reporting requirements.

The EPA estimated that there were 166 facilities in this Commonwealth that would be affected by the recommended 2006 ICS CTG control measures. The Department expects that the universe of potentially affected facility owners and operators could be larger than the group of 166 facility owners and operators identified by the EPA due to the proposed threshold of 2.7 tons (2,455 kilograms) of VOC emissions per 12-month rolling period, before consideration of controls, for implementing the VOC emission control measures. This threshold is equivalent to an average daily emission rate of 15 pounds (6.8 kilograms) of VOC emissions per day, which is equivalent to the evaporation of approximately 2 gallons of VOC-containing industrial cleaning solvent per day. The Department therefore requested the assistance of the Commonwealth's Small Business Development Center's (SBDC) Environmental Management Assistance Program (EMAP) in generating a list of potentially affected businesses in this Commonwealth. The Department's assessment of the number of owners and operators of facilities potentially subject to proposed § 129.63a resulted from reviewing information obtained from the SBDC EMAP as well as information from databases maintained by the Department. The Department also reviewed the methodology of an analysis prepared in 2010 by E.H. Pechan & Associates, Inc. (Pechan) for the State of Texas. The Pechan analysis was used by Texas Department of Environmental Quality (DEQ) staff to assess the impact of their industrial cleaning solvents proposed rulemaking. The Department applied a process similar to the one used by Pechan in Texas to delineate the number of Pennsylvania businesses that may be impacted by proposed § 129.63a.

The EPA listed 469 North American Industry Classification System (NAICS) codes for identifying businesses potentially covered by the 2006 ICS CTG recommendations. The complete list is found in the 2006 ICS CTG in Appendix C, *Summary of NAICS Codes for nonattainment facilities estimated to meet the applicability criteria recommended in this CTG.* As noted by Pechan for the Texas DEQ, this list of NAICS codes provided by the EPA includes

cleaning unit operations at source categories for which VOC emission control regulations already exist in Chapters 129 and 130. Further, it is important to note that a business owner or operator is allowed to select and report the NAICS code of its own choosing. Prior experience by Department staff has shown that this self-reporting of NAICS codes is problematic when trying to accurately identify potentially affected facility owners and operators in this Commonwealth.

The SBDC EMAP provided the Department with a list of potentially affected businesses in this Commonwealth using the 469 NAICS codes included in the 2006 ICS CTG. The initial list identified 144,222 facilities of all sizes. It is likely that many of the facility owners and operators identified by the SBDC EMAP solely through the use of the EPA list of NAICS codes may be subject to other regulations codified in Chapter 129 or Chapter 130 and therefore not subject to proposed § 129.63a. The Department cross-referenced the NAICS codes from the SBDC EMAP list of 144,222 facilities with the list of NAICS codes generated by Pechan as likely being subject to the Texas industrial cleaning solvents rulemaking. Ten NAICS codes from the Pechan Texas report list were identified in the SBDC EMAP list. This cross-referencing reduced the number of potentially affected facility owners and operators in this Commonwealth to 45,718. From Pechan's analysis, it was further determined that only about 1.26% of identified facilities in Texas would be subject to the Texas industrial cleaning solvents rulemaking. Applying the same percentage to the Commonwealth's 'universe' of 45,718, it is estimated that as many as 576 (45,718 x 1.26%) facility owners and operators in this Commonwealth may potentially be subject to proposed § 129.63a. Also from the Pechan analysis, it was determined that 44% of the potentially subject facilities in Texas were likely small businesses. Applying this percentage to the potentially subject group of 576 facility owners and operators identified by the SBDC EMAP, the Department estimated that 253 (576 x 44%) facility owners and operators may be small businesses.

The Department also gathered information about potentially affected facility owners and operators from the "Environmental Facility Application Compliance Tracking System" (eFACTS) database and the "Air Information Management System" (AIMS) database. These are Department permitting and air emissions databases that share data and interface with each other. The eFACTS database contains facility-specific information, including the NAICS code, for permitted facilities and for some previously inspected facilities for which permits are not required. The AIMS database contains site-specific source and air pollutant emissions data, as well as NAICS codes, to maintain the air pollutant emissions inventory. The eFACTS and AIMS database systems do not provide an exhaustive list of all facility owners and operators that conduct industrial cleaning solvent activities in this Commonwealth. The databases include only those facility owners and operators with which the Department has had contact and for which the Department has a reason to input data; these are usually the largest emitters of air pollutants, which may or may not meet the definition of "small business" in accordance with Section 3 of the Regulatory Review Act. This database analysis revealed that the owners or operators of approximately 3,154 facilities in this Commonwealth have a permit issued by the Department that includes provisions for the control of VOC emissions from industrial cleaning solvent processes. Using the factor of 1.26% developed by Pechan for the Texas analysis, the Department estimates that approximately 40 (1.26% x 3,154) of these permitted facility owners and operators would be subject to proposed § 129.63a. The remaining 3,114 permitted facility owners and operators are likely subject to cleaning solvent requirements codified elsewhere in

Chapter 129 or Chapter 130 and therefore reflected in the exceptions listed in proposed subsection (c). Of the potentially affected 40 permitted facility owners and operators, the Department applied the 44% factor developed by Pechan to calculate that as many as 18 (40 x 44%) facility owners and operators identified from the Department's databases may be small businesses.

The draft proposed Annex A was initially discussed with the advisory committees in 2014. The Air Quality Technical Advisory Committee (AQTAC) was briefed on the draft proposed Annex A on February 20, 2014. AQTAC voted 6-4-1 to concur with the Department's recommendation to move the proposed rulemaking forward to the Board with consideration of the comments and concerns, including exemptions and exceptions for feasibility and technical concerns for specialty industries, discussed at the meeting. The draft proposed Annex A was discussed with the Small Business Compliance Advisory Committee (SBCAC) on April 23, 2014. The SBCAC voted unanimously to concur with the Department's recommendation to forward the proposed rulemaking to the Board, with consideration of flexibility for small businesses. In addition, the draft proposed Annex A was discussed with the Citizens Advisory Council (CAC) Policy and Regulatory Oversight Committee on May 6, 2014. On the recommendation of the Policy and Regulatory Oversight Committee, the CAC voted on June 17, 2014, to concur with the Department's recommendation to forward the proposed rulemaking to the Board for consideration.

After consideration of the comments and concerns discussed at the February 20, 2014, AQTAC meeting and the April 23, 2014, SBCAC meeting, and further research on the requirements of other states' regulations, the Department made revisions to the draft proposed Annex A and presented it to the advisory committees for a second time in 2016. Changes to the draft Annex A language for proposed § 129.63a were made to address AQTAC concerns about the emission reduction implementation threshold, exceptions and exemptions, daily recordkeeping and clarity of language, as well as provide greater flexibility for small businesses as requested by the SBCAC. These changes included revising the threshold for implementation of the VOC emission reduction measures from the EPA's recommended 15 pounds (6.8 kilograms) of VOC emissions per day, before consideration of controls, to 2.7 tons (2,455 kilograms) of VOC emissions over a 12-month rolling period, before consideration of controls. The emission of 2.7 tons (2,455 kilograms) of VOCs per 12-month rolling period is equivalent to an average daily emission rate of 15 pounds (6.8 kilograms) of VOC emissions per day, which is equivalent to the evaporation of approximately 2 gallons of VOC-containing industrial cleaning solvent per day. The threshold of 2.7 tons (2,455 kilograms) per 12-month rolling period will provide greater flexibility for small businesses by providing the opportunity to average subject emissions over 12 months by adding the most recent month of data to the 12-month rolling period and dropping the oldest month of data. An exemption provision was added for the use or application of a noncomplying industrial cleaning solvent that is subject to a standard or specification required by the United States Department of Defense, Federal Aviation Administration or other Federal government entity. Technical feasibility concerns for screen printers were also addressed under exceptions and exemptions by specifying that an industrial cleaning solvent used or applied for the cleaning of screen printing equipment has an as applied VOC content that does not exceed 4.2 lb VOC/gal (500 g VOC/l) of industrial cleaning solvent. Digital printing was also added to the list of exceptions and exemptions, as well as the cleaning of resin, coating, ink or adhesive

mixing, and molding and application equipment. The revised draft proposed Annex A also included minor clarifying changes to § 129.73 to correct a numbering error. No changes were made to emission limits or other substantive requirements in § 129.73.

The revised draft proposed Annex A was discussed with the AQTAC on February 11, 2016. AQTAC voted 15-2-0 to concur with the Department's recommendation to present the proposed rulemaking to the Board for consideration for adoption and publication as a proposed rulemaking for public comment. The revised draft proposed Annex A was discussed with the CAC Policy and Regulatory Oversight Committee on March 2, 2016. On the recommendation of the Policy and Regulatory Oversight Committee, the CAC voted on March 15, 2016, to concur with the Department's recommendation to forward the proposed rulemaking to the Board for consideration. The revised draft proposed Annex A was discussed with the SBCAC on April 27, 2016. The SBCAC again voted unanimously to concur with the Department's recommendation to forward the proposed rulemaking to the Board for consideration.

The AQTAC, SBCAC, and CAC meetings are advertised and open to the public.

The proposed revisions to §§ 129.96, 129.97, 129.99 and 129.100 were added after the revised draft proposed Annex A was discussed with the advisory committees. These proposed revisions are minor clarifying amendments made in response to the adoption of the RACT 2 regulations. No changes are proposed to the emission limits or other substantive requirements in these sections.

Additionally, after the revised draft proposed Annex A was discussed with the advisory committees, a revision was made to subsection 129.63a(h)(1)(i)(C) and (D) to clarify that the composite vapor pressure of the complying industrial cleaning solvent as supplied and as applied shall be determined in accordance with subsections (i) and (j). A revision was made to subsection (h)(2)(ii) to clarify that the composite vapor pressure as applied for the exempt industrial cleaning solvent shall be determined in accordance with subsections (i) and (j). A revision was made to subsection (h)(3)(ii) to clarify that the composite vapor pressure as applied for the screen printing equipment industrial cleaning solvent shall be determined in accordance with subsections (i) and (j). A revision was made to subsection (i) to add paragraph (3) to specify that the composite vapor pressure of organic compounds in cleaning unit operation industrial cleaning solvents may be determined through documentation provided by the manufacturer of the industrial cleaning solvent, including an MSDS, CPDS or other data certified by the manufacturer. A revision was also made to subsection (j) to add paragraph (3) to specify that the vapor pressure of each single component compound in a cleaning unit operation industrial cleaning solvent may be determined through documentation provided by the manufacturer of the single component compound, including an MSDS, CPDS or other data certified by the manufacturer. These revisions were made in response to a question asked by an AQTAC member at the February 11, 2016, meeting.

E. *Summary of Regulatory Requirements*

§ 121.1. Definitions.

An error in the definition of "cleaning solvent" would be corrected by inserting a comma.

§ 129.51. General.

Subsection (a) would be amended to establish that compliance with § 129.63a may be achieved by alternative methods.

Subsection (a)(3) would be amended to establish that compliance with the applicable emission limitation in § 129.63a by a method other than the use of compliant materials shall be determined on the basis of equal volumes of solids.

Subsection (a)(6) would be amended to establish that the alternative compliance method must be 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 § 129.63a.

§ 129.63a. Control of VOC emissions from industrial cleaning solvents.

Under subsection (a), this section would apply to the owner and the operator of a facility at which an industrial cleaning solvent is used or applied in a cleaning activity at a cleaning unit operation, a work production-related work area or a part, product, tool, machinery, equipment, vessel, floor or wall.

Subsection (b) would establish four terms and their definitions to be used in this section. The terms are "cleaning activity," "cleaning unit operation," "industrial cleaning solvent" and "regulated VOC."

Subsection (c) would establish exceptions and exemptions for specific circumstances. The list of exceptions under subsection (c)(1) includes cleaning unit operations subject to § 129.63 (relating to degreasing operations) or 40 CFR 63 Subpart T (relating to National emission standards for halogenated solvent cleaning), cleaning unit operations associated with a source category covered by an existing regulation elsewhere in Chapter 129 or 130 and cleaning unit operations associated with certain other specified source categories. Subsection (c)(2) would establish that the VOC emission limitations of subsection (e) do not apply to the use or application of a noncomplying industrial cleaning solvent by the owner or operator of a cleaning unit operation at a facility subject to subsection (a) that uses or applies a noncomplying industrial cleaning solvent subject to a standard or specification required by a Federal government entity or that uses or applies a noncomplying industrial cleaning solvent associated with the cleaning of screen printing equipment when the as applied industrial cleaning solvent VOC content is 4.2 lb VOC/gal (500 g VOC/l) of industrial cleaning solvent or less. Subsection (c)(3) would establish that the VOC emission limitations of subsection (e) and the work practice requirements of subsection (f) do not apply to the owner or operator of a facility subject to subsection (a) if the total combined actual VOC emissions from all subject cleaning unit operations at the facility are

less than 2.7 tons (2,455 kilograms) per 12-month rolling period, before consideration of controls. These owners and operators would still be subject to the recordkeeping and reporting requirements of subsection (h).

The Board is requesting comment on the need to establish an exemption for the use and application of an industrial cleaning solvent subject to a standard or specification required by a plastic recycling operation.

Subsection (d) would establish that the requirements of this section supersede the requirements of a RACT permit issued to the owner or operator of a cleaning unit operation subject to this section prior to the effective date of adoption of this proposed rulemaking under §§ 129.91—129.95 (relating to stationary sources of NO_x and VOCs) to control, reduce or minimize VOCs from cleaning unit operation cleaning activities at the facility, except to the extent the RACT permit contains more stringent requirements.

Subsection (e) would establish that, beginning with the effective date of adoption of this proposed rulemaking, the owner or operator of a facility at which the total combined actual VOC emissions from all subject cleaning unit operations at the facility are equal to or greater than 2.7 tons (2,455 kilograms) per 12-month rolling period, before consideration of controls, may not cause or permit the emission into the outdoor atmosphere of VOCs from an industrial cleaning solvent used or applied in a cleaning unit operation subject to this section at the facility, unless the industrial cleaning solvent meets one of the two specified emissions limitation options. The first emissions limitation option is to use an industrial cleaning solvent with either a VOC content less than or equal to 0.42 lb VOC/gal (50 g VOC/l) as applied or a VOC composite vapor pressure less than or equal to 8 mm mercury at 68oF (20oC) as applied. The second emissions limitation option is to use a VOC emissions capture system and an add-on air pollution control device that is acceptable under § 129.51(a) to reduce the weight of VOCs emitted to the atmosphere from cleaning unit operation cleaning activities. The overall emission reduction 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 85% or may be no less than the equivalent efficiency as calculated by the specified equation, whichever is less stringent. As with all RACT regulations, an owner or operator with VOC emissions at or above the threshold to implement the VOC emission control measures would remain subject to the VOC emission control requirements of proposed § 129.63a even if the VOC emissions from the affected sources fall below the emissions threshold for implementation of the VOC emission control measures.

Proposed § 129.63a would establish an emissions threshold of 2.7 tons (2,455 kilograms) of VOC per 12-month rolling period, before consideration of controls, for consistency with other regulations in Chapter 129 and with SIP-approved requirements in other states. Emission levels at, above and below this threshold would determine with which other specified requirements a subject facility owner or operator would need to comply, including VOC emission limitations, work practice requirements, and recordkeeping and reporting requirements. The emission of 2.7 tons (2,455 kilograms) of VOCs per 12-month rolling period is equivalent to an average daily emission rate of 15 pounds (6.8 kilograms) per day, which is equivalent to the evaporation of approximately 2 gallons of industrial cleaning solvent per day. The Board is requesting comment on whether the emissions threshold should be established at 15 pounds (6.8 kilograms)

of VOC per day as recommended by the 2006 ICS CTG. The proposed emissions threshold of 2.7 tons (2,455 kilograms) per 12-month rolling period would provide greater flexibility for small businesses by providing the opportunity to average subject emissions over 12 months by adding the most recent month of data to the 12-month rolling period and dropping the oldest month of data. An affected owner or operator with 1 or more days of VOC emissions higher than 15 pounds (6.8 kilograms) could average those emissions over the month and the 12-month rolling period to maintain an emission rate that would be below the 2.7 tons (2,455 kilograms) per 12-month rolling period and thereby not be required to implement the VOC emission control measures. If the threshold for implementing the VOC emission controls is 15 pounds (6.8 kilograms) per day, an affected owner or operator with just 1 day of 15 pounds (6.8 kilograms) or more of emissions would be required to implement the VOC emission control measures, regardless of whether the level of emissions on the other days of operation is consistently below the 15 pounds (6.8 kilograms) per day.

Subsection (f) would establish work practice requirements for industrial cleaning solvents, used shop towels and waste materials.

Subsection (g) would establish requirements for affected owners and operators to demonstrate compliance.

Subsection (h) would establish recordkeeping and reporting requirements.

Subsection (i) would establish procedures for determining the composite vapor pressure of organic compounds in cleaning unit operation industrial cleaning solvents.

Subsection (j) would establish procedures for determining the vapor pressure of each single component compound in a cleaning unit operation industrial cleaning solvent.

Subsection (k) would establish ASTM method references.

§ 129.73. Aerospace manufacturing and rework.

Table II (relating to allowable content of VOCs in aerospace coatings) of § 129.73 would be amended to correct a numbering error that was promulgated at 29 Pa. B. 1879 (April 10, 1999). The coating type, "high-temperature coating," was numbered incorrectly as (20)(a). The coating type, "high-temperature coating," would be renumbered as (21). The succeeding coating types would be renumbered accordingly. The title of Table II would be revised to delete the redundant phrase *allowable VOC content*. No other changes would be made to this section.

Minor clarifying amendments would be proposed for §§ 129.96, 129.97, 129.99 and 129.100 under the recently promulgated regulations for additional RACT requirements for major sources of NO_x and VOCs to update the list of presumptive VOC RACT regulations for which RACT 2 does not apply and to clarify certain requirements. These sections were promulgated at 46 Pa. B. 2036 (April 23, 2016).

Subsections 129.96(a) and (b) (relating to applicability) would be amended to revise the list of regulations under which a presumptive RACT requirement or presumptive RACT emission limitation, or both, has been established from §§ 129.51—129.52c to §§ 129.51—129.52e and from §§ 129.71—129.73, 129.75 to §§ 129.71—129.75. This revision would add the recently promulgated rulemakings for §§ 129.52d, 129.52e and 129.74 (relating to control of VOC emissions from miscellaneous metal parts surface coating processes, miscellaneous plastic parts surface coating processes and pleasure craft surface coatings; control of VOC emissions from automobile and light-duty truck assembly coating operations and heavier vehicle coating operations; and control of VOC emissions from fiberglass boat manufacturing materials). Section 129.52d was promulgated at 46 Pa. B. 6758 (October 22, 2016); § 129.52e was promulgated at 46 Pa. B. 6743 (October 22, 2016); and § 129.74 was promulgated at 45 Pa. B. 7127 (December 19, 2015).

Subsections 129.97(k)(1)(ii) and 129.99(i)(1)(ii) (relating to presumptive RACT requirements, RACT emission limitations and petition for alternative compliance schedule; and alternative RACT proposal and petition for alternative compliance schedule) would be amended to add the phrase "or major VOC emitting facility" for clarity.

Subsection 129.100(a) (relating to compliance demonstration and recordkeeping requirements) would be amended to add the word "RACT" in two places for clarity.

No changes to the emission limits or other substantive requirements in these four sections are proposed.

F. Benefits, Costs and Compliance

Benefits

The Department estimates that the owners and operators of as many as 576 facilities across this Commonwealth may potentially be subject to proposed § 129.63a, of which as many as 253 may meet the definition of small business as defined in Section 3 of the Regulatory Review Act, 71 P.S. § 745.3. It is possible that far fewer than 576 facility owners and operators would be subject to this proposed section, depending on if the VOC emissions are from a cleaning unit operation subject to an existing regulation codified in Chapter 129 or Chapter 130 or qualify for an exemption under proposed subsection (c).

Using data from the 2002 National Emissions Inventory database, the EPA provides in the 2006 ICS CTG that of the total VOC emissions from solvent cleaning operations Nationally (64,000 megagrams per year (Mg/yr); 71,000 tons per year (tpy)), approximately 4,000 Mg/yr (4,400 tpy) were from degreasing operations that use industrial cleaning solvents. The Department regulates the VOC emissions from degreasing operations under existing § 129.63. The remaining 60,000 Mg/yr (66,600 tpy) were from the other solvent cleaning activities that are the subject of proposed § 129.63a. Therefore, of the total VOC emissions from solvent cleaning operations of 71,000 tpy, approximately 6% of those emissions were from degreasing operations and approximately 94% were from other industrial cleaning solvent cleaning activities.

The EPA estimated that 166 facilities in this Commonwealth would be affected by the recommended 2006 ICS CTG control measures, with baseline total emissions of VOC of 3,660 Mg/yr. The 3,660 Mg/yr converts to 4,034 tpy. Prorating this amount of emissions to the Department's estimated group of 576 potentially affected facility owners and operators projects total VOC emissions of as much as 13,997 tpy (576 facilities/X tpy = 166 facilities/4,034 tpy) if the VOC emissions from subject cleaning activities are not already controlled. Of the total projected VOC emissions of 13,997 tpy from the potentially affected group of 576 facility owners and operators, as much as 13,157 tpy (13,997 tpy x 94%) may be from the other solvent cleaning activities addressed by proposed § 129.63a.

The EPA assumed that the average VOC concentration of high VOC-content solvents is 900 grams of VOC per liter of solvent (g VOC/l). The EPA-recommended VOC emission control limit for an industrial cleaning solvent is a VOC concentration of 50 g VOC/l. The use of an industrial cleaning solvent with a VOC content of 50 g VOC/l would be a reduction of approximately 95% or 95% control efficiency ([(900 g/l – 50 g/l) / 900 g/l] x 100 = 95%).

The Department estimated the maximum amount of potential VOC emission reductions that may be generated through implementation of the control measures in proposed § 129.63a by using the EPA's control efficiency of 95% times the estimated projected amount of total VOC emissions of 13,157 tpy. The estimated amount of VOC emission reductions from the potentially affected 576 facility owners and operators, including small businesses, could be as much as 12,499 tpy (13,157 tpy x 95%). The estimated average amount of potential VOC emission reductions per affected owner and operator could be approximately 22 tpy per affected facility (12,499 tpy/576 facilities). The amount of VOC emission reductions achieved by implementing these control measures could be less depending on the level of compliance already demonstrated by the affected facility owners and operators.

The Statewide implementation of the VOC emission control measures in proposed § 129.63a would benefit the health and welfare of the approximately 12.77 million residents and the numerous animals, crops, ecosystems and natural areas of this Commonwealth by reducing emissions of VOCs, which are precursors to the formation of ground-level ozone air pollution. Exposure to high concentrations of ground-level ozone is a serious human and animal health and welfare threat, causing respiratory illnesses and decreased lung function 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 Statewide implementation of the control measures in proposed § 129.63a would assist the Department in reducing VOC emissions from the specified industrial cleaning solvents activities locally and reducing the resultant local formation of ground-level ozone and transport of VOC emissions and ground-level ozone to downwind states. Statewide implementation would also facilitate enforcement of proposed § 129.63a within this Commonwealth. The measures in proposed § 129.63a are reasonably necessary to attain and maintain the health-based and welfare-based 8-hour ozone NAAQS and to satisfy related CAA requirements in this Commonwealth.

Proposed § 129.63a may create economic opportunities for VOC emission control technology innovators, manufacturers and distributors through an increased demand for new or improved equipment. In addition, the owners and operators of regulated facilities may be required to install and operate an emissions monitoring system or equipment necessary for an emissions monitoring method in order to comply with proposed § 129.63a, thereby creating an economic opportunity for the emissions monitoring industry.

On February 3, 2017, the EPA published a finding that the District of Columbia and 15 states, including the Commonwealth, failed to submit SIP revisions in a timely manner to satisfy certain requirements for the 2008 ozone NAAQS that apply to the OTR. See 82 FR 9158. The finding related to the Commonwealth is based on its failure to submit certain required RACT SIP elements, including RACT for industrial cleaning solvents, by July 20, 2014. See 82 FR 9160. The effective date of the finding of failure to submit is March 6, 2017. The Commonwealth must submit the missing SIP elements to the EPA by 18 months from the effective date, or September 6, 2018. The timely submission of a SIP revision based on this proposed rulemaking, when promulgated, is necessary to avoid costs to the Commonwealth from potential sanctions imposed by the EPA under section 179 of the CAA (42 U.S.C.A. § 7509), including the costs of additional offsets for new or modified sources of emissions and costs related to the loss of Federal highway funding.

The proposed revisions for §§ 121.1, 129.51, 129.73, 129.96, 129.97, 129.99 and 129.100 are clarifying amendments only. These revisions would not change the social or environmental impact of these sections on the health and welfare of the residents and the ecosystems and natural areas of this Commonwealth or the regulated community. The benefits of these proposed revisions would be improved clarity.

Compliance Costs

Using the EPA cost number of $1,453 as the baseline for annual operating costs and the cost range of $1,171 to $1,480 to implement the recommended control measures in proposed

§ 129.63a, the estimated combined total economic impact for the owners and operators of the estimated 576 potentially affected facilities, including small businesses, ranges from annual costs of as low as $15,552 to total annual savings of $162,432. The annual financial impact on potentially affected facility owners and operators could range from an average savings of $282 per affected facility owner and operator to an average cost of $27 per affected facility owner and operator. The cost effectiveness could range from a savings of approximately $12.99 per ton of VOC emissions reduced per year ($162,432 total savings / 12,499 tons of total VOC emissions reduced per year) to a cost of approximately $1.24 per ton of VOC emissions reduced per year ($15,552 costs / 12,499).

The monetized health benefits to Commonwealth residents and the economic benefits to the Commonwealth's agricultural, hardwoods and tourism industries as a result of attaining and maintaining the ground-level 8-hour ozone NAAQS, achieved in part through reduced emissions of ozone precursors from the use of compliant industrial cleaning solvents in this Commonwealth, are considerable in comparison to the costs that would be incurred by the owners and operators of potentially subject facilities to comply with proposed § 129.63a. The EPA has estimated the monetized health benefits of attaining the 2008 and 2015 ozone NAAQS. The EPA estimated that the monetized health benefits of attaining the 2008 8-hour ozone NAAQS of 0.075 ppm range from $8.3 billion to $18 billion on a National basis by 2020. See *Regulatory Impact Analysis, Final National Ambient Air Quality Standard for Ozone*, July 2011. Prorating that benefit to the Commonwealth, based on population, results in a public health benefit of $337 million to $732 million. Similarly, the EPA estimated that the monetized health benefits of attaining the 2015 8-hour ozone NAAQS of 0.070 ppm range from $1.5 billion to $4.5 billion on a National basis by 2025. See *Regulatory Impact Analysis of the Final Revisions to the National Ambient Air Quality Standards for Ground-Level Ozone*, September 2015. Prorating that benefit to the Commonwealth, based on population, results in a public health benefit of $63 million to $189 million. These estimated monetized health benefits would not all be the result of implementing the RACT measures in proposed § 129.63a, but the EPA estimates are indicative of the benefits to Commonwealth residents of attaining and maintaining the 2008 and 2015 8-hour ozone NAAQS through the implementation of a suite of measures to control VOC emissions in the aggregate from different source categories.

The estimated combined total economic impact for the owners and operators of the 576 potentially affected facilities ranges from annual costs of $15,552 to total annual savings of $162,432. The worst-case scenario of annual costs of $15,552 for the affected owners and operators is very small in comparison to the potential economic gains in public health and welfare to Commonwealth residents of attaining and maintaining the 8-hour ozone NAAQS. The estimated annual financial impact on potentially affected facility owners and operators, including small businesses, could range from an average annual savings of $282 per affected facility owner and operator to an average annual cost of $27 per affected facility owner and operator, again a very small financial impact on the regulated community in comparison to the potential economic gains in public health and welfare.

The negative impacts on individuals, small businesses, labor communities and the regulated community are expected to be minimal to none. The owner and operator of an affected facility

would likely incur savings or, in the worst case scenario, little-to-no cost to implement the requirements of proposed § 129.63a. Common industrial cleaning solvents, such as Stoddard solvent, mineral spirits and other common solvents provided by suppliers have vapor pressures well below the 8 mmHg limit in proposed § 129.63a. The owners and operators of potentially affected facilities such as automobile repair garages and metal parts manufacturing facilities, as well as other common manufacturing facilities already using these materials, would not likely need to make any changes to their industrial cleaning solvent materials.

Because of the wide availability and lower cost (compared to the installation and operation of a VOC emissions capture system and an add-on air pollution control device) of compliant VOC content industrial cleaning solvent materials, these are generally used to reduce VOC emissions from industrial cleaning solvent activities. The regulated industry in this Commonwealth is expected to realize cost savings because low-VOC content industrial cleaning solvent materials are readily available at a cost that is lower than the high-VOC content industrial cleaning solvent materials they replace as a result of similar requirements already in effect in neighboring states.

The VOC emission limitations established by proposed § 129.63a would not require the submission of applications for amendments to existing operating permits. These requirements would be incorporated as applicable requirements at the time of permit renewal, if less than 3 years remain in the permit term, as specified under § 127.463(c) (relating to operating permit revisions to incorporate applicable standards). If 3 years or more remain in the permit term, the requirements would be incorporated as applicable requirements in the permit within 18 months of the promulgation of the final-form rulemaking, as required under § 127.463(b). 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, proposed § 129.63a would apply to affected owners and operators irrespective of a modification to the Operating Permit.

The proposed revisions for §§ 121.1, 129.51, 129.73, 129.96, 129.97, 129.99, and 129.100 are clarifying amendments only. These revisions would not change the financial impact of these sections on affected persons or the regulated community. The benefits of these proposed revisions would be improved clarity.

New legal, accounting or consulting procedures would not be required to comply with this proposed rulemaking.

Compliance Assistance Plan

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

Paperwork Requirements

The owner and operator of a cleaning unit operation subject to proposed § 129.63a would be required to keep records of specified information for industrial cleaning solvent materials, as applicable, sufficient to demonstrate compliance with the applicable requirements of this section for the emission levels at, above and below the threshold of 2.7 tons (2,455 kilograms) of VOC emissions per 12-month rolling period, before consideration of controls. Demonstration of VOC emission levels at, above and below this threshold would determine with which other specified requirements a subject facility owner or operator would need to comply, including work practice requirements, compliance demonstration requirements and recordkeeping and reporting requirements. Proposed § 129.63a would establish monthly recordkeeping requirements of specified parameters of industrial cleaning solvents, including VOC content and composite vapor pressure, for the owner and operator of an affected facility, regardless of the total amount of combined actual VOC emissions from subject industrial cleaning solvent unit operations at the facility. Records of operating parameters would be required of the owner and operator of an affected facility if a VOC emissions capture system and an add-on air pollution control device are used to ensure compliance. Recordkeeping requirements are expected to be minimal for the affected facility owners and operators; the recordkeeping requirements for many affected facility owners and operators would likely be met by using the monthly purchase records and material safety data sheets that most facility owners and operators already keep for other purposes. Records shall 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, consent decree or order issued by the Department. Records shall be submitted to the Department in an acceptable format upon receipt of a written request from the Department.

The proposed revisions for §§ 121.1, 129.51, 129.73, 129.96, 129.97, 129.99, and 129.100 are clarifying amendments only. These revisions would likely not change the legal, accounting, consulting or recordkeeping and reporting impact of these sections on the regulated entities.

G. Pollution Prevention

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

Statewide implementation of the VOC emission control measures in proposed § 129.63a could generate reductions of as much as 12,499 tons of VOC emissions per 12-month rolling period from the potentially affected 576 facilities, depending on the level of compliance already demonstrated by the owners and operators of these facilities. These projected estimated reductions in VOC emissions and the subsequent reduced formation of ozone would help ensure

that the owners and operators of regulated facilities, farms and agricultural enterprises, hardwoods and timber industries, and tourism-related businesses, and residents of labor communities and citizens and the environment of this Commonwealth experience the benefits of improved ground-level ozone air quality. Commonwealth residents would also potentially benefit from improved groundwater quality through reduced quantities of VOCs and hazardous air pollutants (HAP) from low-VOC content and low-HAP content industrial cleaning solvent materials. Although proposed § 129.63a is designed primarily to address ozone air quality, the reformulation of high-VOC content cleaning solvent materials to low-VOC content cleaning solvent materials or substitution of low-VOC content cleaning solvent 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 cleaning solvents would benefit groundwater quality through reduced loading on water treatment plants and in reduced quantities of high-VOC content and high-HAP content cleaning solvents leaching into the ground, streams and rivers.

Proposed § 129.63a provides as one compliance option the use of compliant industrial cleaning solvent materials in proposed subsection (e)(1). Industrial cleaning solvent materials that are compliant with the proposed VOC content limit and composite vapor pressure limit are readily available to the owners and operators of all sizes of subject facilities. Proposed § 129.63a would provide flexibility in compliance through the second option in subsection (e)(2) of installing and operating a VOC emissions capture system and an add-on air pollution control device with an overall control efficiency of at least 85% or no less than the equivalent efficiency calculated using the specified equation.

This proposed rulemaking also provides flexibility to the owners and operators potentially affected by proposed § 129.63a by amending § 129.51(a) to extend its applicability to the owner and operator of a coating operation subject to proposed § 129.63a. 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 achieved by compliance with the proposed control measures, by submitting the alternative method to the Department for review and approval in an applicable plan approval or operating permit, or both.

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 and composite vapor pressure cleaning solvent materials, compliant cleaning solvent materials are generally expected to be used by affected owners and operators to reduce VOC emissions from industrial cleaning solvent activities subject to proposed § 129.63a.

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

The proposed revisions for §§ 121.1, 129.51, 129.73, 129.96, 129.97, 129.99, and 129.100 are clarifying amendments only. These revisions would not change the pollution prevention impact of these sections.

H. Sunset Review

The Board is not establishing a sunset date for this regulation, since it is needed for the Department to carry out its statutory authority. The Department will continue to closely monitor this regulation for its effectiveness and recommend updates to the Board as necessary.

I. Regulatory Review

Under section 5(a) of the Regulatory Review Act (71 P.S. § 745.5(a)), on May 31, 2017, the Department submitted a copy of this proposed rulemaking and a copy of a Regulatory Analysis Form to the Independent Regulatory Review Commission (IRRC) and to the Chairpersons of the House and Senate Environmental Resources and Energy Committees. A copy of this material is available to the public upon request.

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

J. Public Comments

Interested persons are invited to submit written comments, suggestions, support, or objections regarding the proposed rulemaking to the Board. In particular, comments are requested on specific questions discussed in section E, including the need for an exemption in § 129.63a(c) related to plastic recycling operations and the use of a VOC applicability threshold based on daily emissions rather than emissions per a 12-month rolling period. Comments, suggestions, support, or objections must be received by the Board by August 21, 2017.

Comments may be submitted to the Board online, by e-mail, by mail or express mail as follows.

Comments may be submitted to the Board by accessing eComment at http://www.ahs.dep.pa.gov/eComment.

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

If an acknowledgement of comments submitted online or by e-mail is not received by the sender within 2 working days, the comments should be retransmitted to the Board to ensure receipt. Comments submitted by facsimile will not be accepted.

Written comments should be mailed to the Environmental Quality Board, P.O. Box 8477, Harrisburg, PA 17105-8477. Express mail should be sent to the Environmental Quality Board,

Rachel Carson State Office Building, 16th Floor, 400 Market Street, Harrisburg, PA 17101-2301.

K. Public Hearings

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

July 18, 2017 Department of Environmental Protection
Southeast Regional Office
4th Floor Hearing Room
2 East Main Street
Norristown, PA 19401

July 19, 2017 Department of Environmental Protection
Southwest Regional Office
Waterfront Conference Rooms A and B
400 Waterfront Drive
Pittsburgh, PA 15222

July 20, 2017 Department of Environmental Protection
Rachel Carson State Office Building
Conference Room 105
400 Market Street
Harrisburg, PA 17105

Persons wishing to present testimony at a hearing are requested to contact the Environmental Quality Board, P. O. Box 8477, Harrisburg, PA 17105-8477, (717) 787-4526 at least 1 week in advance of the hearing to reserve a time to present testimony. Oral testimony is limited to 5 minutes for each witness. Witnesses are requested to submit three written copies of their oral testimony to the hearing chairperson at the hearing. Organizations are limited to designating one witness to present testimony on their behalf at each hearing.

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

Patrick McDonnell
Chairperson

PROPOSED RULEMAKING
Annex A
TITLE 25. ENVIRONMENTAL PROTECTION
PART I. DEPARTMENT OF ENVIRONMENTAL PROTECTION
Subpart C. PROTECTION OF NATURAL RESOURCES
ARTICLE III. AIR RESOURCES
CHAPTER 121. GENERAL PROVISIONS

§ 121.1. Definitions.

The definitions in section 3 of the act (35 P. S. § 4003) apply to this article. In addition, the following words and terms, when used in this article, have the following meanings, unless the context clearly indicates otherwise:

* * * * *

Cleaning solvent–A liquid material used for hand-wipe, spray gun or flush cleaning. The term includes solutions that contain VOCs.

* * * * *

CHAPTER 129. STANDARDS FOR SOURCES

SOURCES OF VOCs

§ 129.51. General.

(a) *Equivalency.* Compliance with §§ 129.52, 129.52a, 129.52b, 129.52c, 129.52d, 129.52e, **[129.54—129.67]** **<u>129.54—129.63, 129.63a, 129.64—129.67,</u>** 129.67a, 129.67b, 129.68, 129.69, 129.71—129.73 and 129.77 may be achieved by alternative methods if the following exist:

(1) The alternative method is approved by the Department in an applicable plan approval or operating permit, or both.

(2) The resulting emissions are equal to or less than the emissions that would have been discharged by complying with the applicable emission limitation.

(3) Compliance by a method other than the use of a low VOC coating, adhesive, sealant, adhesive primer, sealant primer, surface preparation solvent, cleanup solvent, cleaning solution, fountain solution or ink which meets the applicable emission limitation in §§ 129.52, 129.52a, 129.52b, 129.52c, 129.52d, 129.52e, **<u>129.63a,</u>** 129.67, 129.67a, 129.67b, 129.73 and 129.77 shall be determined on the basis of equal volumes of solids.

(4) Capture efficiency testing and emissions testing are conducted in accordance with methods approved by the EPA.

(5) Adequate records are maintained to ensure enforceability.

(6) 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 § 129.52, § 129.52a, § 129.52b, § 129.52c, § 129.52d, § 129.52e, **§ 129.63a,** § 129.67, § 129.67a, § 129.67b, § 129.68(b)(2) and (c)(2), § 129.73 or § 129.77.

* * * * *

(*Editor's Note*: Section 129.63a is new and printed in regular type to enhance readability.)

§ 129.63a. Control of VOC emissions from industrial cleaning solvents.

(a) *Applicability.* This section applies to the owner and the operator of a facility at which an industrial cleaning solvent is used or applied in a cleaning activity at a cleaning unit operation, a work production-related work area or a part, product, tool, machinery, equipment, vessel, floor or wall.

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

Cleaning activity–The use or application of an industrial cleaning solvent to remove a contaminant, such as an adhesive, ink, paint, dirt, soil, oil or grease, by wiping, flushing, brushing, soaking, spraying or a similar effort.

Cleaning unit operation–An operation at a facility that is a source of VOC emissions from a cleaning activity. The following apply:

(i) The term includes the following:

(A) Spray gun cleaning.

(B) Spray booth cleaning.

(C) Large manufactured components cleaning.

(D) Parts cleaning.

(E) Equipment cleaning.

(F) Line cleaning.

(G) Floor cleaning.

(H) Tank cleaning.

(I) Small manufactured components cleaning.

(ii) The term does not include VOC emissions from the use or application of consumer products subject to Chapter 130, Subchapter B (relating to consumer products), including an institutional product or industrial and institutional (I&I) product as defined in § 130.202 (relating to definitions) for cleaning offices, bathrooms or other areas that are not part of a cleaning unit operation or work production-related work area.

Industrial cleaning solvent–A product formulated with one or more regulated VOCs.

Regulated VOC–An organic compound which participates in atmospheric photochemical reactions; that is, an organic compound other than those which the Administrator of the EPA designates in 40 CFR 51.100 (relating to definitions) as having negligible photochemical reactivity.

(c) *Exceptions and exemptions.*

(1) This section does not apply to the following:

(i) An owner or operator of a cleaning unit operation subject to § 129.63 (relating to degreasing operations) or 40 CFR 63 Subpart T (relating to national emission standards for halogenated solvent cleaning).

(ii) An owner or operator of a cleaning unit operation associated with a category listed below:

(A) Aerospace coatings.

(B) Architectural coatings.

(C) Automobile and light-duty truck assembly coatings.

(D) Fabric coating.

(E) Fiberglass boat manufacturing materials.

(F) Flat wood paneling coatings.

(G) Flexible packaging printing materials.

(H) Graphic arts printing and coating operations.

(I) Large appliance coatings.

(J) Letterpress printing materials.

(K) Lithographic printing materials.

(L) Magnet wire coating operations.

(M) Marine vessel coating.

(N) Metal container, closure and coil coating.

(O) Metal furniture coatings.

(P) Miscellaneous metal parts coatings.

(Q) Miscellaneous industrial adhesives.

(R) Motor vehicle and mobile equipment coating operations.

(S) Paper, film and foil coating.

(T) Plastic parts coatings.

(U) Polyester resin operations.

(V) Semiconductor wafer fabrication operations.

(X) Shipbuilding and repair coatings.

(Y) Wood furniture coatings.

(Z) Wood products coating.

(AA) Electrical and electronic components.

(BB) Precision optics.

(CC) Numismatic dies.

(DD) Stripping of cured inks, coatings and adhesives.

(EE) Cleaning of resin, coating, ink or adhesive mixing, molding and application equipment.

(FF) Resin, coating, ink and adhesive manufacturing.

(GG) Performance or quality assurance testing of coatings, inks or adhesives.

(HH) Flexible and rigid disc manufacturing.

(II) Research and development laboratories.

(JJ) Medical device manufacturing.

(KK) Pharmaceutical manufacturing.

(LL) Janitorial cleaning.

(MM) Digital printing.

(2) The VOC emission limitations of subsection (e) do not apply to the use or application of a noncomplying industrial cleaning solvent by the owner or operator of a cleaning unit operation at a facility subject to subsection (a) under the following circumstances:

(i) The use or application of the noncomplying industrial cleaning solvent is subject to a standard or specification required by the United States Department of Defense, Federal Aviation Administration or other Federal government entity. An owner or operator claiming this exemption shall maintain records in accordance with subsection (h)(2).

(ii) The use or application of the noncomplying industrial cleaning solvent is associated with the cleaning of screen printing equipment and the industrial cleaning solvent used or applied has an as applied VOC content that does not exceed 4.2 pounds of VOC per gallon (lb VOC/gal) (500 grams of VOC per liter (g VOC/l)) of industrial cleaning solvent. An owner or operator claiming this exemption shall maintain records in accordance with subsection (h)(3).

(3) The VOC emission limitations of subsection (e) and the work practice requirements of subsection (f) do not apply to the owner or operator of a facility subject to subsection (a) if the total combined actual VOC emissions from all subject cleaning unit operations at the facility are less than 2.7 tons (2,455 kilograms) per 12-month rolling period, before consideration of controls. An owner or operator claiming this exemption shall maintain records in accordance with subsection (h)(4).

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

(e) *Emissions limitations.* Beginning _____ (*Editor's Note:* The blank refers to the effective date of adoption of this proposed rulemaking.), the owner or operator of a facility at which the total combined actual VOC emissions from all subject cleaning unit operations at the facility are equal to or greater than 2.7 tons (2,455 kilograms) per 12-month rolling period, before consideration of controls, may not cause or permit the emission into the outdoor atmosphere of VOCs from an industrial cleaning solvent used or applied in a cleaning unit operation subject to this section at the facility, unless one of the following limitations is met.

(1) *Compliant solvents.* The industrial cleaning solvent meets one of the following VOC limits:

(i) A VOC content less than or equal to 0.42 pounds of VOC per gallon (lb VOC/gal) (50 grams of VOC per liter (g VOC/l)) as applied.

(ii) A VOC composite vapor pressure less than or equal to 8 mm mercury at 68°F (20°C) as applied.

(2) *VOC emissions capture system and add-on air pollution control device.* The weight of VOCs emitted to the atmosphere from cleaning unit operation cleaning activities is reduced through the use of vapor recovery or incineration or another method that is acceptable under § 129.51(a) (relating to general). The overall emission reduction 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 85% or may be no less than the equivalent efficiency as calculated by the following equation, whichever is less stringent:

$$O = (1 - E/V) \times 100$$

Where:

O = The overall required control efficiency.

E = 0.42 lb VOC/gal or 50 g VOC/l.

V = The VOC content of the industrial cleaning solvent, in lb VOC/gal or g VOC/l.

(f) *Work practice requirements for industrial cleaning solvents, used shop towels and waste materials.* The owner or operator of a facility subject to subsection (e) shall comply with the following work practices for industrial cleaning solvents and shop towels used in the cleaning unit operation cleaning activity:

(1) Store all VOC-containing industrial cleaning solvents, used shop towels and related waste materials in closed containers.

(2) Ensure that mixing and storage containers used for VOC-containing industrial cleaning solvents and related waste materials are kept closed at all times except when depositing or removing these materials.

(3) Minimize spills of VOC-containing industrial cleaning solvents and related waste materials and clean up spills immediately.

(4) Convey VOC-containing industrial cleaning solvents and related waste materials from one location to another in closed containers or pipes.

(5) Minimize VOC emissions from cleaning of storage, mixing and conveying equipment.

(6) Minimize air circulation around cleaning unit operations.

(g) *Compliance demonstration.* The owner or operator of a cleaning unit operation subject to this section shall demonstrate compliance as follows:

(1) The owner or operator of a facility at which the total combined actual VOC emissions from all subject cleaning unit operations at the facility are equal to or greater than 2.7 tons (2,455 kilograms) per 12-month rolling period, before consideration of controls, shall do either of the following:

(i) Ensure that industrial cleaning solvents used or applied in the subject cleaning unit operations at the facility meet the applicable emissions limitation in subsection (e)(1) and maintain records in accordance with subsection (h)(1)(i).

(ii) Use a VOC emissions capture system and an add-on air pollution control device that meets the VOC emission reduction requirement under subsection (e)(2), equip the add-on air pollution control device with the applicable monitoring equipment and maintain records in accordance with subsection (h)(1)(ii). The following apply:

(A) The monitoring equipment shall be installed, calibrated, operated and maintained according to manufacturer's specifications at all times when the add-on air pollution control device is operating.

(B) The add-on air pollution control device must be operating when the cleaning activity is occurring.

(2) The owner or operator of a cleaning unit operation subject to this section claiming exemption under:

(i) Subsection (c)(2)(i) shall maintain records in accordance with subsection (h)(2).

(ii) Subsection (c)(2)(ii) shall maintain records in accordance with subsection (h)(3).

(iii) Subsection (c)(3) shall maintain records in accordance with subsection (h)(4).

(3) The owner or operator of a cleaning unit operation subject to this section shall determine the VOC content of the industrial cleaning solvent as applied by conducting sampling and testing of the industrial cleaning solvent in accordance with the procedures and test methods specified in subsections (i) and (j) and Chapter 139.

(4) The owner or operator of a cleaning unit operation subject to paragraph (3) may use other test methods or documentation to demonstrate compliance with this section if approved in advance in writing by the Department and the EPA.

(h) *Recordkeeping and reporting requirements.* The owner or operator of a cleaning unit operation subject to this section shall comply with the following recordkeeping and reporting requirements:

(1) The owner or operator of a facility at which the total combined actual VOC emissions from all subject cleaning unit operations at the facility are equal to or greater than 2.7 tons (2,455 kilograms) per 12-month rolling period, before consideration of controls, shall maintain the following records:

(i) For an owner or operator that complies with this section by using a complying industrial cleaning solvent under subsection (e)(1), records of the following parameters for each cleaning unit operation industrial cleaning solvent:

(A) The name and identification number.

(B) The weight percent of total volatiles, water and exempt solvents, as supplied.

(C) The VOC content or composite vapor pressure, as supplied. The composite vapor pressure as supplied shall be determined in accordance with subsections (i) and (j).

(D) The VOC content or composite vapor pressure, as applied. The composite vapor pressure as applied shall be determined in accordance with subsections (i) and (j).

(E) The volume used or applied on a monthly basis.

(ii) For an owner or operator that complies with this section through the use of a VOC emissions capture system and an add-on air pollution control device under subsection (e)(2), records sufficient to demonstrate the following:

(A) Sampling and testing conducted in accordance with Chapter 139 as required under subsection (e)(2).

(B) Calibration, operation and maintenance of the monitoring equipment installed under subsection (g)(1)(ii) in accordance with manufacturer's specifications.

(2) The owner or operator of a cleaning unit operation claiming exemption under subsection (c)(2)(i) shall maintain records of the following information for the exempt industrial cleaning solvent:

(i) A copy of the applicable standard or specification.

(ii) The VOC content or composite vapor pressure, as applied. The composite vapor pressure as applied shall be determined in accordance with subsections (i) and (j).

(iii) The volume used or applied monthly.

(3) The owner or operator of a screen printing equipment cleaning unit operation claiming exemption under subsection (c)(2)(ii) shall maintain records of the following information for the screen printing equipment industrial cleaning solvent:

(i) The name and identification number.

(ii) The VOC content or composite vapor pressure, as applied. The composite vapor pressure as applied shall be determined in accordance with subsections (i) and (j).

(iii) The volume used or applied monthly.

(4) The owner or operator of a facility claiming exemption under subsection (c)(3) shall maintain monthly records of the industrial cleaning solvents used or applied at the subject cleaning unit operations sufficient to demonstrate that the total combined actual VOC emissions from all subject cleaning unit operations at the facility are less than 2.7 tons (2,455 kilograms) per 12-month rolling period, before consideration of controls.

(5) Records shall 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, consent decree or order issued by the Department.

(6) Records shall be submitted to the Department in an acceptable format upon receipt of a written request from the Department.

(i) C*omposite vapor pressure.* The composite vapor pressure of organic compounds in cleaning unit operation industrial cleaning solvents shall be determined by one or more of the following procedures:

(1) Quantifying the amount of each compound in the blend using gas chromatographic analysis, using one or more of the following methods:

(i) An appropriate and current ASTM test method with prior written approval from the Department and the EPA.

(ii) Another test method demonstrated to provide results that are acceptable for purposes of determining compliance with this section if prior approval is obtained in writing from the Department and the EPA.

(2) Calculating the composite vapor pressure using the following equation:

$$Pp_c = \frac{\sum_{i=1}^{n} (W_i)\,(VP_i)/Mw_i}{W_w/Mw_w + \sum_{e=1}^{k} W_e/Mw_e + \sum_{i=1}^{n} W_i/Mw_i}$$

Where:

Pp_c = VOC composite partial pressure at 20°C, in mm mercury.

W_i = Weight of the "i"th VOC compound, in grams, as determined by ASTM E260.

W_w = Weight of water, in grams, as determined by ASTM D3792.

W_e = Weight of the "e"th exempt compound, in grams, as determined by ASTM E260.

Mw_i = Molecular weight of the "i"th VOC compound, in grams per g-mole, as given in chemical reference literature.

Mw_w = Molecular weight of water, 18 grams per g-mole.

Mw_e = Molecular weight of the "e"th exempt compound, in grams per g-mole, as given in chemical reference literature.

VP_i = Vapor pressure of the "i"th VOC compound at 20°C, in mm mercury, as determined by subsection (j).

(3) Providing documentation from the manufacturer of the industrial cleaning solvent that indicates the composite vapor pressure. The documentation may include an MSDS, CPDS or other data certified by the manufacturer.

(j) *Vapor pressure of single component compound.* The vapor pressure of each single component compound in a cleaning unit operation industrial cleaning solvent shall be determined from one or more of the following:

(1) An appropriate and current ASTM test method with prior written approval from the Department and the EPA.

(2) The most recent edition of one or more of the following sources:

(i) *Vapour Pressures of Pure Substances*, Boublik, Elsevier Scientific Publishing Company, New York.

(ii) *Perry's Chemical Engineers' Handbook*, Green and Perry, McGraw-Hill Book Company.

(iii) *CRC Handbook of Chemistry and Physics*, CRC Press.

(iv) *Lange's Handbook of Chemistry*, McGraw-Hill Book Company.

(3) Documentation provided by the manufacturer of the single component compound that indicates the vapor pressure of the single component compound. The documentation may include an MSDS, CPDS or other data certified by the manufacturer.

(k) *ASTM method references.* References to ASTM methods in this section pertain to test methods developed by ASTM International, 100 Barr Harbor Drive, P.O. Box C700, West Conshohocken, PA 19428-2959, USA, or www.astm.org.

§ 129.73. Aerospace manufacturing and rework.

* * * * *

(3) Beginning April 10, 1999, a person may not apply to aerospace vehicles or components, aerospace specialty coatings, primers, topcoats and chemical milling maskants including VOC-containing materials added to the original coating supplied by the manufacturer, that contain VOCs in excess of the limits specified in Table II.

(i) Aerospace coatings that meet the definitions of the specific coatings in Table II shall meet those allowable coating VOC limits.

(ii) All other aerospace primers, aerospace topcoats and chemical milling maskants are subject to the general coating VOC limits for aerospace primers, aerospace topcoats and aerospace chemical milling maskants.

TABLE II
Allowable Content of VOCs in Aerospace Coatings
[Allowable VOC Content]
Weight of VOC Per Volume of Coating (Minus Water and Exempt Solvents)

COATING TYPE	*LIMIT POUNDS PER GALLON*	*GRAMS PER LITER*
Specialty Coatings		
(1) Ablative Coating	5.0	600
(2) Adhesion Promoter	7.4	890
(3) Adhesive Bonding Primers:		
(a) Cured at 250°F or below	7.1	850
(b) Cured above 250°F	8.6	1,030
(4) Adhesives:		
(a) Commercial Interior Adhesive	6.3	760
(b) Cyanoacrylate Adhesive	8.5	1,020
(c) Fuel Tank Adhesive	5.2	620
(d) Nonstructural Adhesive	3.0	360
(e) Rocket Motor Bonding Adhesive	7.4	890
(f) Rubber-Based Adhesive	7.1	850

(g) Structural Autoclavable Adhesive	0.5	60
(h) Structural Nonautoclavable Adhesive	7.1	850
(5) Antichafe Coating	5.5	660
(6) Chemical Agent-Resistant Coating	4.6	550
(7) Clear Coating	6.0	720
(8) Commercial Exterior Aerodynamic Structure Primer	5.4	650
(9) Compatible Substrate Primer	6.5	780
(10) Corrosion Prevention Compound	5.9	710
(11) Cryogenic Flexible Primer	5.4	645
(12) Cryoprotective Coating	5.0	600
(13) Electric or Radiation-Effect Coating	6.7	800
(14) Electrostatic Discharge and Electromagnetic Interference (EMI) Coating	6.7	800
(15) Elevated Temperature Skydrol Resistant Commercial Primer	6.2	740
(16) Epoxy Polyamide Topcoat	5.5	660
(17) Fire-Resistant (Interior) Coating	6.7	800
(18) Flexible Primer	5.4	640
(19) Flight-Test Coatings:		
(a) Missile or Single Use Aircraft	3.5	420
(b) All Other	7.0	840
(20) Fuel-Tank Coating	6.0	720
[(a)] **(21)** High-Temperature Coating	7.1	850
[(21)] **(22)** Insulation Covering	6.2	740
[(22)] **(23)** Intermediate Release Coating	6.2	750
[(23)] **(24)** Lacquer	6.9	830
[(24)] **(25)** Maskants:		
(a) Bonding Maskant	10.2	1,230
(b) Critical Use and Line Sealer Maskant	8.6	1,020
(c) Seal Coat Maskant	10.2	1,230
[(25)] **(26)** Metallized Epoxy Coating	6.2	740
[(26)] **(27)** Mold Release	6.5	780
[(27)] **(28)** Optical Anti-Reflective Coating	6.2	750
[(28)] **(29)** Part Marking Coating	7.1	850
[(29)] **(30)** Pretreatment Coating	6.5	780
[(30)] **(31)** Rain Erosion-Resistant Coating	7.1	850
[(31)] **(32)** Rocket Motor Nozzle Coating	5.5	660
[(32)] **(33)** Scale Inhibitor	7.3	880
[(33)] **(34)** Screen Print Ink	7.0	840

[(34)] (35) Sealants:		
(a) Extrudable/Rollable/Brushable Sealant	2.0	240
(b) Sprayable Sealant	5.0	600
[(35)] (36) Self-Priming Topcoat	3.5	420
[(36)] (37) Silicone Insulation Material	7.1	850
[(37)] (38) Solid Film Lubricant	7.3	880
[(38)] (39) Specialized Function Coating	7.4	890
[(39)] (40) Temporary Protective Coating	2.7	320
[(40)] (41) Thermal Control Coating	6.7	800
[(41)] (42) Wet Fastener Installation Coating	5.6	675
[(42)] (43) Wing Coating	7.1	850
Aerospace Primers, Aerospace Topcoats andAerospace Chemical Milling Maskants		
(1) Primers	2.9	350
(2) Topcoats	3.5	420
(3) Chemical Milling Maskants (Type I/II)	1.3	160

(4) The mass of VOC per combined volume of VOC and coating solids, less water and exempt compounds shall be calculated for each coating by the following equation:

$$VOC = \frac{(Wv - Ww - Wex)(Dc)}{100\% - (Ww)(Dc/Dw) - (Wex)(Dc/Dex)}$$

* * * * *

ADDITIONAL RACT REQUIREMENTS FOR MAJOR SOURCES OF NO_x AND VOCs

§ 129.96. Applicability.

(a) The NO_x requirements of this section and §§ 129.97—129.100 apply Statewide to the owner and operator of a major NO_x emitting facility and the VOC requirements of this section and §§ 129.97—129.100 apply Statewide to the owner and operator of a major VOC emitting facility that were in existence on or before July 20, 2012, for which a requirement or emission limitation, or both, has not been established in §§ **[129.51—129.52c]** **129.51—129.52e**, 129.54—129.69, **[129.71—129.73, 129.75]** **129.71—129.75**, 129.77, 129.101—129.107 and 129.301—129.310.

(b) The NO_x requirements of this section and §§ 129.97—129.100 apply Statewide to the owner and operator of a NO_x emitting facility and the VOC requirements of this section and §§ 129.97—129.100 apply Statewide to the owner and operator of a VOC emitting facility when the installation of a new source or a modification or change in operation of an existing source after July 20, 2012, results in the source or facility meeting the definition of a major NO_x emitting

facility or a major VOC emitting facility and for which a requirement or an emission limitation, or both, has not been established in §§ **[129.51—129.52c]** **129.51—129.52e**, 129.54—129.69, **[129.71—129.73, 129.75]** **129.71—129.75**, 129.77, 129.101—129.107 and 129.301—129.310.

* * * * *

§ 129.97. Presumptive RACT requirements, RACT emission limitations and petition for alternative compliance schedule.

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(k) The owner or operator of a major NO_x emitting facility or a major VOC emitting facility subject to § 129.96 that includes an air contamination source subject to one or more of subsections (b)—(h) that cannot meet the applicable presumptive RACT requirement or RACT emission limitation without installation of an air cleaning device may submit a petition, in writing, requesting an alternative compliance schedule in accordance with the following:

(1) The written petition shall be submitted to the Department or appropriate approved local air pollution control agency as soon as possible but not later than:

(i) October 24, 2016, for a source subject to § 129.96(a).

(ii) October 24, 2016, or 6 months after the date that the source meets the definition of a major NO_x emitting facility **or major VOC emitting facility**, whichever is later, for a source subject to § 129.96(b).

* * * * *

§ 129.99. Alternative RACT proposal and petition for alternative compliance schedule.

* * * * *

(i) The owner and operator of a facility proposing to comply with the applicable RACT requirement or RACT emission limitation under subsection (a), (b) or (c) through the installation of an air cleaning device may submit a petition, in writing, requesting an alternative compliance schedule in accordance with the following:

(1) The written petition requesting an alternative compliance schedule shall be submitted to the Department or appropriate approved local air pollution control agency as soon as possible but not later than:

(i) October 24, 2016, for a source subject to § 129.96(a).

(ii) October 24, 2016, or 6 months after the date that the source meets the definition of a major NOx emitting facility **or major VOC emitting facility**, whichever is later, for a source subject to § 129.96(b).

* * * * *

§ 129.100. Compliance demonstration and recordkeeping requirements.

(a) Except as provided in subsection (c), the owner and operator of an air contamination source subject to a NOx **RACT** requirement or RACT emission limitation or VOC **RACT** requirement or RACT emission limitation, or both, listed in § 129.97 (relating to presumptive RACT requirements, RACT emission limitations and petition for alternative compliance schedule) shall demonstrate compliance with the applicable RACT requirement or RACT emission limitation by performing the following monitoring or testing procedures:

* * * * *

pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

May 31, 2017

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

Re: Proposed Rulemaking: Control of VOC Emissions from Industrial Cleaning Solvents; General Provisions; Aerospace Manufacturing and Rework; and Additional RACT Requirements for Major Sources of NO_x and VOCs (#7-492)

Dear Mr. Sumner:

Pursuant to Section 5(a) of the Regulatory Review Act, please find enclosed a copy of a proposed regulation for review and comment by the Independent Regulatory Review Commission (Commission). This proposal is scheduled for publication in the *Pennsylvania Bulletin* on June 17, 2017, with a 64-day public comment period. The Environmental Quality Board (EQB) adopted this proposal on March 21, 2017.

This enclosed proposed rulemaking is designed to limit emissions of volatile organic compounds (VOC) from the use and application of industrial cleaning solvents at stationary sources that are not regulated elsewhere in Chapters 129 and 130. The Federal Clean Air Act (CAA) requires VOC emissions from industrial cleaning solvents to be reduced to achieve and maintain ambient ozone levels. The Pennsylvania Air Pollution Control Act (APCA) grants the EQB the authority to adopt rules and regulations for the prevention, control, reduction and abatement of pollution in this Commonwealth and also adopt rules and regulations designed to implement the provisions of the CAA.

The proposed rulemaking would add § 129.63a (relating to control of VOC emissions from industrial cleaning solvents) and would also amend §§ 121.1 and 129.51 (relating to definitions; and general) to support the addition of § 129.63a. Minor clarifying changes are proposed for § 129.73 (relating to aerospace manufacturing and rework) and specified sections of the recently promulgated additional reasonably available control technology (RACT) requirements for major sources of nitrogen oxides (NO_x) and VOCs (RACT 2).

Proposed § 129.63a establishes VOC emission limitations, work practice standards, and monthly recordkeeping and reporting requirements consistent with the RACT recommendations of the EPA 2006 Industrial Cleaning Solvents Control Techniques Guidelines (2006 ICS CTG) for these sources in this Commonwealth. These requirements would apply statewide to the owner and the operator of a facility at which an industrial cleaning solvent is used or applied in a cleaning activity to remove a contaminant, including an adhesive, ink, paint, dirt, soil, oil, or

grease, at a cleaning unit operation, a work production-related work area or a part, product, tool, machinery, equipment, vessel, floor, or wall, except as specified in proposed § 129.63a(c).

The VOC emission limitations and work practice standards would apply statewide to the owner and the operator of a facility at which the total combined actual VOC emissions from all subject cleaning unit operations at the facility are equal to or greater than 2.7 tons per 12-month rolling period, before consideration of controls. An owner and operator with total combined actual VOC emissions less than 2.7 tons per 12-month rolling period, before consideration of controls, from subject cleaning unit operations would only be subject to the monthly recordkeeping and, if requested by the Department of Environmental Protection (DEP), reporting requirements.

The affected owners and operators would have two options for bringing VOC emissions into compliance: the use of complying industrial cleaning solvents or the installation and operation of a VOC emissions capture system and an add-on air pollution control device.

DEP estimates that the owners and operators of as many as 576 facilities statewide may potentially be subject to proposed § 129.63a, of which as many as 253 may meet the definition of small business. Switching noncomplying solvents to complying solvents could incur costs, likely minimal, since complying solvents are readily available at costs similar to noncomplying solvents. The installation and operation of a VOC emissions capture system and an add-on air pollution control device would likely incur costs. However, compliant cleaning solvent materials are generally expected to be used by affected owners and operators. The implementation of the work practices is expected to result in a net cost savings. Reporting, recordkeeping (purchase records and material safety data sheets), and administrative costs relating to implementation of the proposed VOC emission control measures are expected to be minimal.

The estimated economic impact for the 576 potentially affected facility owners and operators ranges from annual costs of as low as $15,552 to total annual cost savings of $162,432. The annual financial impact could range from an average savings of $282 to an average cost of $27 per affected facility owner and operator. The cost-effectiveness could range from a savings of approximately $12.99 to a cost of approximately $1.24 per ton of VOC emissions reduced per year.

The estimated amount of VOC emission reductions from the potentially affected 576 facilities could be as much as 12,499 tons per year (tpy). The average amount of VOC emission reductions could be approximately 22 tpy per affected facility. Reductions in VOC emissions due to this rulemaking will enable the Commonwealth to make progress in attaining and maintaining the 1997, 2008, and 2015 8-hour ozone NAAQS.

The draft proposed Annex A was initially discussed in 2014 with the Air Quality Technical Advisory Committee (AQTAC) and the Small Business Compliance Advisory Committee (SBCAC). Changes to the draft Annex A language were made to address AQTAC and SBCAC concerns. The revised draft proposed rulemaking Annex A was discussed with AQTAC on February 2, 2016, and the SBCAC on April 27, 2016. AQTAC voted 15-2-0 and the SBCAC voted unanimously to concur with DEP's recommendation to present the proposed rulemaking to the EQB for consideration. The revised draft Annex A was discussed with the Citizens Advisory

Council (CAC) on March 15, 2016, and the CAC also voted to concur with DEP's recommendation to forward the proposed rulemaking to the EQB for consideration.

The proposed revisions to §§ 129.96, 129.97, 129.99, and 129.100 were added after the revised draft proposed rulemaking Annex A was discussed with the advisory committees. These proposed revisions are minor clarifying amendments made in response to the promulgation of the RACT 2 regulations on April 23, 2016. DEP added language to § 129.63a(h) since the 2016 advisory committee meetings to clarify that composite vapor pressure as supplied or applied shall be determined in accordance with §§ 129.63a(i) and (j). DEP also added language to §§ 129.63a(i) and (j) for clarity and to provide additional options to determine the vapor pressure of the organic compounds. These revisions were made in response to a question asked by an AQTAC member at the meeting of February 11, 2016.

This proposed rulemaking would be submitted to the EPA for approval as a revision to the Commonwealth's SIP following promulgation of the final-form rulemaking.

Deadline for action and finding of failure to submit

The EPA issued the 2006 ICS CTG on October 5, 2006 and provided a one-year period for the required SIP submittal, making SIP revisions for implementation of the 2006 ICS CTG recommendations due by October 5, 2007. The Commonwealth is overdue to submit the 2006 ICS CTG SIP element to the EPA.

On February 3, 2017, the EPA published a finding that the District of Columbia and 15 states, including Pennsylvania, failed to submit SIP revisions in a timely manner to satisfy certain requirements for the 2008 ozone National Ambient Air Quality Standard (NAAQS) that apply to the Ozone Transport Region. The finding related to the Commonwealth is based on its failure to submit certain required RACT SIP elements, including RACT for industrial cleaning solvents, by July 20, 2014. The effective date of the finding of failure to submit is March 6, 2017. The Commonwealth must submit the missing SIP elements to the EPA by 18 months from the effective date, or September 6, 2018. The timely submission of a SIP revision based on this proposed rulemaking, when promulgated, is necessary to avoid costs to the Commonwealth from sanctions that must be imposed by the EPA on September 6, 2018, as required by section 179 of the CAA (42 U.S.C.A. § 7509). The sanctions include the costs of additional offsets for new or modified sources of emissions and costs related to the loss of Federal highway funding.

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

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

Sincerely,

Laura Edinger

Laura Edinger
Regulatory Coordinator

Enclosures

0120-FM-PO0011 6/2015

pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
POLICY OFFICE

TRANSMITTAL SHEET FOR REGULATIONS SUBJECT TO THE REGULATORY REVIEW ACT

I.D. NUMBER: 7-492

SUBJECT: Control of VOC Emissions from Industrial Cleaning Solvents; General Provisions; Aerospace Manufacturing & Rework; and Additional RACT Requirements for Major Sources of NOx & VOCs

AGENCY: DEPARTMENT OF ENVIRONMENTAL PROTECTION

TYPE OF REGULATION

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

FILING OF REGULATION

DATE	SIGNATURE	DESIGNATION
May 31, 2017	Shelly K. Weaner	Majority Chair, HOUSE COMMITTEE ON ENVIRONMENTAL RESOURCES & ENERGY Representative John Maher
May 31, 2017	Richard Kotz	Minority Chair, HOUSE COMMITTEE ON ENVIRONMENTAL RESOURCES & ENERGY Representative Mike Carroll
May 31, 2017	[illegible]	Majority Chair, SENATE COMMITTEE ON ENVIRONMENTAL RESOURCES & ENERGY Senator Gene Yaw
May 31, 2017	Joanne Mangnuelli	Minority Chair, SENATE COMMITTEE ON ENVIRONMENTAL RESOURCES & ENERGY Senator John Yudichak
May 31, 2017	Fiona Wilmark	INDEPENDENT REGULATORY REVIEW COMMISSION David Sumner
		ATTORNEY GENERAL (for Final Omitted only)
May 31, 2017		LEGISLATIVE REFERENCE BUREAU (for Proposed only)

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
POLICY OFFICE

TRANSMITTAL SHEET FOR REGULATIONS SUBJECT TO THE REGULATORY REVIEW ACT

ID NUMBER: 7-442

SUBJECT: Control of VOC Emissions from Stationary Clean Burn Natural Gas Reciprocating Internal Combustion Engines and Reciprocating Internal Combustion Engines Fueled by Landfill Gas or Digester Gas

AGENCY: DEPARTMENT OF ENVIRONMENTAL PROTECTION

TYPE OF REGULATION

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

FILING OF REGULATION

DATE	SIGNATURE	DESIGNATION
May 2, 2001	[signature]	Majority Chair, HOUSE COMMITTEE ON ENVIRONMENTAL RESOURCES & ENERGY Representative John Maher
May 2, 2001	[signature]	Minority Chair, HOUSE COMMITTEE ON ENVIRONMENTAL RESOURCES & ENERGY Representative Mike Gerlach
May 2, 2001	[signature]	Majority Chair, SENATE COMMITTEE ON ENVIRONMENTAL RESOURCES & ENERGY Senator Gene Yaw
May 2, 2001	[signature]	Minority Chair, SENATE COMMITTEE ON ENVIRONMENTAL RESOURCES & ENERGY Senator John Wozniak
May 2, 2001	[signature]	INDEPENDENT REGULATORY REVIEW COMMISSION David Sumner
		ATTORNEY GENERAL (for Final Omitted only)
May 2, 2001	[signature]	LEGISLATIVE REFERENCE BUREAU (for Proposed only)