



**pennsylvania**  
DEPARTMENT OF ENVIRONMENTAL  
PROTECTION

**Bureau of Air Quality**

**CONTROL OF  
VOLATILE ORGANIC COMPOUND EMISSIONS  
FROM  
INDUSTRIAL CLEANING SOLVENTS; GENERAL  
PROVISIONS; AEROSPACE MANUFACTURING AND  
REWORK; ADDITIONAL RACT REQUIREMENTS FOR  
MAJOR SOURCES OF NOX AND VOCS**

25 Pa. Code Chapters 121 and 129  
47 Pa.B. 3356 (June 17, 2017)  
Environmental Quality Board Regulation #7-492  
(Independent Regulatory Review Commission #3173)

**Comment and Response Document**

**Control of VOC Emissions from Industrial Cleaning Solvents;  
General Provisions; Aerospace Manufacturing and Rework;  
Additional RACT Requirements for Major Sources of NO<sub>x</sub> and VOCs**

On June 17, 2017, the Environmental Quality Board (Board, EQB) published a *Pennsylvania Bulletin* notice of public hearings and written comment period on the proposed amendments to Chapter 129 (relating to standards for sources) for the control of volatile organic compound (VOC) emissions from Industrial Cleaning Solvents; General Provisions; Aerospace Manufacturing and Rework; Additional RACT Requirements for Major Sources of NO<sub>x</sub> and VOCs (47 Pa.B. 3356). The proposed rulemaking would primarily add § 129.63a (relating to control of VOC emissions from industrial cleaning solvents) to adopt VOC emission limitations and other requirements consistent with the reasonably available control technology (RACT) recommendations of the United States Environmental Protection Agency (EPA) in its 2006 Control Techniques Guidelines (CTG) for industrial cleaning solvents 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, 58753 (October 5, 2006). The EPA's CTG document, *Control Techniques Guidelines for Industrial Cleaning Solvents*, EPA 453/R-06-001, Office of Air Quality Planning and Standards, EPA, September 2006, is available on the EPA's website at: <https://www.epa.gov/ozone-pollution/control-techniques-guidelines-and-alternative-control-techniques-documents-reducing>

The proposed rulemaking also included amendments to §§ 121.1 and 129.51 (relating to definitions; and general) to support the addition of § 129.63a, as well as amendments to § 129.73 (relating to aerospace manufacturing and rework) to correct a numbering error in the table of VOC content limits. Amendments were also proposed to §§ 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<sub>x</sub>) 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 in the RACT 2 regulations.

The public comment period opened on June 17, 2017, and closed on August 21, 2017. Three public hearings were held on the proposed rulemaking as follows:

July 18, 2017 1:00 p.m.	Department of Environmental Protection Southeast Regional Office 4th Floor Hearing Room 2 East Main Street Norristown, PA 19401
July 19, 2017 1:00 p.m.	Department of Environmental Protection Southwest Region Office Waterfront Conference Rooms A and B 400 Waterfront Drive Pittsburgh, PA 15222

July 20, 2017  
1:00 p.m.

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

This document summarizes the written comments received from the public during the public comment period. The Board invited each public commentator to prepare a one-page summary of the commentator's comments. No one-page summaries were submitted to the Board for this rulemaking. One person provided testimony during the public hearings. The Independent Regulatory Review Commission (IRRC) submitted written comments following the public comment period, which are also summarized in this document. No written comments were received from the Senate or House Environmental Resources and Energy Committees. Each comment is listed with an identifying number for each commentator that made the comment. A list of the commentators, including name and affiliation, can be found below.

The final-form regulation will be submitted to the EPA as a revision to the State Implementation Plan (SIP) upon publication in the *Pennsylvania Bulletin* as a final-form regulation.

Copies of all comments received are posted on the IRRC web site at <http://www.irc.state.pa.us>. Search by Regulation # 7-493 or IRRC # 3173.

**Table of Commentators to the Environmental Quality Board**

<b>ID</b>	<b>Name/Address</b>	<b>Submitted One-Page Summary for distribution to EQB</b>	<b>Provided Testimony</b>	<b>Requested Copy of Final Rulemaking following EQB Action</b>
1.	Michael Kocak C.U.E. Inc. 11 Leonburg Rd Cranberry Township, PA 16066	<b>No</b>	<b>No</b>	<b>No</b>
2.	Emlyn Vélez Rosa US Environmental Protection Agency Region III 1650 Arch Street (3AP30) Philadelphia, PA 19103	<b>No</b>	<b>No</b>	<b>No</b>
3.	Rick Hartwig Specialty Graphic Imaging Assoc. (SGIA) 10015 Main Street Fairfax, Virginia 22031	<b>No</b>	<b>Yes</b>	<b>No</b>
4.	Michael Anderson Lockheed Martin Corporation 6000 Midlantic Drive 7 <sup>th</sup> Floor, North Tower Mt. Laurel, NJ 08054	<b>No</b>	<b>No</b>	<b>No</b>
5.	David Shanks Boeing EHS Policy Analysis and Strategy Mail Stop S111-2491 P.O. Box 516 St. Louis, MO 63166	<b>No</b>	<b>No</b>	<b>No</b>
6.	Eric Peffel Senior Air Quality Engineer East Penn Manufacturing Co., Inc. 102 Deka Rd. Lyon Station, PA 19536	<b>No</b>	<b>No</b>	<b>No</b>
7.	David Darling American Coating Association 901 New York Ave., NW Washington DC, 20001	<b>No</b>	<b>No</b>	<b>No</b>
8.	David Sumner Independent Regulatory Review Commission 333 Market Street, 14th Floor Harrisburg, PA 17101	<b>No</b>	<b>No</b>	<b>No</b>

## Acronyms used in this Comment/Response Document

AQTAC – Air Quality Technical Advisory Committee  
CAA – Clean Air Act  
CTG – Control Techniques Guidelines  
DEP – Pennsylvania Department of Environmental Protection  
EPA – United States Environmental Protection Agency  
EQB – Environmental Quality Board  
FR – Federal Register  
ICS – Industrial Cleaning Solvent  
IRRC – Independent Regulatory Review Commission  
NAICS – North American Industry Classification System  
RACT – Reasonably Available Control Technology  
SGIA – Specialty Graphic Imaging Association  
SIP – State Implementation Plan  
VOC – Volatile Organic Compound  
2006 ICS CTG – The EPA’s 2006 Control Techniques Guidelines for Industrial Cleaning Solvents, EPA 453/R-06-001, September 2006

### General Support of Proposed Rulemaking

**1. Comment:** A commentator supported the proposed rulemaking in 25 Pa. Code § 129.63a because it based the VOC applicability threshold on a 2.7 ton per 12-month rolling period. (1)

**Response:** The Department thanks the commentator for their support of this rulemaking.

**2. Comment.** A commentator concurred with the Department’s language to allow screen printing operations to use cleaning solvents with a VOC content of no more than 4.2 pounds per gallon or 500 grams per liter and that this VOC content represents RACT for the industry. (3)

**Response:** The Department thanks the commentator for their support of this rulemaking.

### IRRC Criteria

**3. Comment:** The IRRC commented that the EPA, Region III, cites several concerns in its comments related to the new rule in Section 129.63a and proposed amendments to the RACT 2 rule in Section 129.96. The IRRC explained that, because EPA’s comments relate to IRRC’s criteria regarding implementation, ambiguity, reasonableness and clarity, IRRC shares EPA’s concerns and incorporates them into the Commission’s comments on the proposed regulation. IRRC commented that the EQB should carefully review EPA’s comments and work closely with EPA to make the necessary amendments to bring this regulation into compliance with Federal requirements. The IRRC indicated that it will consider EQB’s response to EPA in making a final determination as to whether the regulation is in the public interest. (8)

**Response:** The Department appreciates the comment. After careful consideration of the comments of IRRC and the EPA (as well as all other comments), discussions with EPA Region

III, and revisions to the proposed rulemaking as appropriate, the Department is confident that IRRC will find the final-form rulemaking to be in the public interest and not contrary to the Commission's criteria regarding implementation, ambiguity, reasonableness or clarity. Please see the Department's responses to EPA Comments 5, 10, 12-16, and 18-21.

**4. Comment:** The IRRC commented that members of the regulated community request revisions to and clarification of the exemptions under Subsection (c) (relating to exceptions and exemptions) and Subsection (e) (relating to emissions limitations). The IRRC asked EQB to clarify and explain the reasonableness of exemptions and compliance options in the final-form regulation. (8)

IRRC noted that comments include the following:

- Lockheed Martin asks EQB to modify the regulation to include an exemption for other non-coating application/activities that are critical to aerospace manufacturing and rework facilities. Likewise, Boeing Company states that the term "aerospace coatings" could be interpreted to limit the exemption to aerospace solvent cleaning activities associated with "coatings" only.
- East Penn Manufacturing states that it is "technically infeasible to use an alternate solvent wiping solution for battery cleaning operations" and that the use of an emissions capture system and add-on air pollution control device to abate VOC emissions from a battery cleaning operation is not cost-effective.

**Response:** The Department appreciates IRRC's concerns. After careful consideration of the referenced comments, the Department has clarified the proposed rulemaking and amended the final-form rulemaking as appropriate. Please see the responses to Comment 6 from Lockheed Martin and Boeing Company and to Comments 8 and 9 from East Penn Manufacturing.

### **Applicability**

**5. Comment:** The EPA commented that the applicability of the emissions limitations and work practice standards under §§ 129.63a(e) and 129.63a(f) of the proposed regulation are limited to "the owner or operator of a facility at which the total combined actual volatile organic compounds (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." For clarity and ease of implementation, the emissions threshold requirement should also be included in § 129.63a(a), applicability. The IRRC shared the EPA's concerns and incorporated them into IRRC's comments. (2, 8)

**Response:** The EPA references the applicability of the emission limitations and work practice standards to 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. However, the proposed rulemaking also applies to cleaning operations with total VOC emissions below the 2.7 tons per 12-month rolling period, as the owner or operator of a facility with cleaning

operations emitting less than 2.7 tons per 12-month rolling period must demonstrate that they remain below that level by maintaining monthly records. The Department did not move the emissions threshold of 2.7 tons per 12-month rolling period to § 129.63a(a) because including it under the general applicability subsection could cause confusion. For instance, if it were moved to § 129.63a(a), owners and operators of facilities with total VOC emissions below the 2.7 tons per 12-month rolling period, before consideration of controls, might only read § 129.63a(a) and incorrectly assume that no portion of § 129.63a applies to them. The Department retained the general applicability of § 129.63a(a) without changes in the final-form rulemaking.

### **Exemptions and Alternatives to § 129.63a**

**6. Comment:** Two commentators expressed concern that the exemption for “aerospace coatings” in § 129.63a(c)(1)(ii)(A) can be interpreted to limit the exemption to aerospace solvent cleaning activities associated with coatings only. The commentators asserted that the interpretation would be contrary to the EPA’s Aerospace CTG, the 2006 ICS CTG, and the Pennsylvania Aerospace regulation under § 129.73, and that it is not feasible to use low VOC or aqueous industrial cleaning solvents for all operations at their aerospace manufacturing and rework facilities. The commentators suggested that § 129.63a(c)(1)(ii)(A) be amended by changing the exemption category name from “Aerospace Coatings” to “Aerospace Manufacturing and Rework Operations.” The IRRC asked EQB to clarify and explain the reasonableness of exemptions and compliance options in the final-form regulation. (4, 5, 8)

**Response:** The Department agrees with the commentators. The Department used the exemption category nomenclature specified on page 8 of the 2006 ICS CTG in the proposed rulemaking. The Department revised the category name from “Aerospace Coatings” to “Aerospace Manufacturing and Rework Operations” upon consideration of the commentators’ concerns. This revision clarifies that non-coating applications conducted during aerospace manufacturing and rework operations, such as hand-wipe methods to remove dirt, oil, and grease in the assembly process and composites processing, bonding, and inspection, are exempt from this rulemaking. These operations are subject to the applicable requirements of § 129.73.

**7. Comment:** A commentator noted that the regulation should include a specific categorical exemption to § 129.63a(c) to exclude emission sources that have previously proposed or established RACT in accordance with the alternative RACT requirements of §§ 129.96—129.100. The IRRC asked the EQB to clarify and explain the reasonableness of exemptions and compliance options in the final-form regulation. (6, 8)

**Response:** The Department appreciates the commentators’ concerns. Proposed § 129.63a did not include a categorical exemption for emission sources that have previously proposed or established RACT requirements in accordance with the alternative RACT requirements of § 129.99 (relating to alternative RACT proposal and petition for alternative compliance schedule). Please also see the responses to Comments 8 and 9.

The “Control Techniques Guidelines: Industrial Cleaning Solvents,” EPA 453/R-06-001, Office of Air Quality Planning and Standards, EPA, September 2006 (2006 ICS CTG) provides States with recommendations to inform their own determination as to what constitutes RACT for

industrial cleaning solvents. See 2006 ICS CTG at p. 3. The Department reviewed the recommendations and determined that the control measures provided in the 2006 ICS CTG constitute RACT for industrial cleaning solvents in this Commonwealth.

The 2006 ICS CTG does not provide for a categorical exemption for alternative RACT approaches in a State's regulations for control of VOC emissions from industrial cleaning solvents. The RACT requirements and RACT emissions limitations in this final-form rulemaking are consistent with the recommendations of the 2006 ICS CTG for industrial cleaning solvents in this Commonwealth. No changes were made from proposed to final in response to this comment.

**8. Comment:** The commentator manufactures batteries and noted that it is technically infeasible to use an alternative non-VOC or low-VOC content industrial cleaning solvent as a wiping solution for battery cleaning operations. The IRRC asked the EQB to clarify and explain the reasonableness of exemptions and compliance options in the final-form regulation. (6, 8)

**Response:** The Department appreciates the commentators' concerns. Battery manufacturing falls under the general NAICS code of 335 (pertaining to electrical equipment, appliance, and component manufacturing) and a specific NAICS code of 3359 (pertaining to other electrical equipment and component manufacturing). Proposed § 129.63a(c) listed exceptions and exemptions to which proposed § 129.63a would not apply. Under proposed § 129.63a(c)(1)(ii), an owner or operator of a cleaning unit operation associated with the electrical and electronic components category in § 129.63a(c)(1)(ii)(Z) is not subject to the requirements of this ICS rulemaking. Therefore, the commentator's assertion regarding the technical infeasibility of using alternative solvent wiping solutions in battery cleaning operations is addressed by the Department through the exemption of electrical and electronic components, which includes battery manufacturing, from the requirements of § 129.63a. No changes were made from proposed to final in response to this comment.

**9. Comment:** The commentator noted that the regulation should include an alternative compliance option under § 129.63a(e) to allow facilities to propose alternative RACT conditions to DEP in accordance with the provisions of §§ 129.96—129.100. The commentator further noted that it is technically infeasible to use alternative non-VOC or low-VOC content industrial cleaning solvent as solvent wiping solutions in battery cleaning operations and that the installation of a VOC emissions capture system and add-on pollution control device is not cost effective. The commentator notes that a "case-by-case" compliance option should be allowed for facilities that cannot meet the available compliance options due to the technical infeasibility of alternative materials or the cost infeasibility of add-on capture and control systems. The IRRC asked the EQB to clarify and explain the reasonableness of exemptions and compliance options in the final-form regulation. (6, 8)

**Response:** As explained in the response to Comment 7, the RACT requirements and RACT emissions limitations in the proposed rulemaking were consistent with the recommendations in the 2006 ICS CTG. The 2006 ICS CTG does not include a case-by-case compliance option, but does include an Alternative Composite Vapor Pressure Limit compliance option, in which the EPA recommends inclusion of a composite vapor pressure limit of 8 millimeters of mercury

(mmHg) at 20 degrees Celsius, as: 1) a replacement for the recommended 50 grams per liter (g/l) VOC content limit entirely; or 2) an alternative limit that may be used in place of the recommended 50 g/l VOC content limit for specific operations as determined by the State or local agency. See 2006 ICS CTG at p. 8.

Consistent with the recommendation in the 2006 ICS CTG, the Department proposed the Alternative Composite Vapor Pressure Limit of 8 mmHg at 20 degrees Celsius as a compliant solvent option in proposed § 129.63a(e)(1) for all industrial cleaning solvent operations subject to the proposed rulemaking requirements. The Department also amended § 129.51(a) and § 129.51(a)(3) by adding § 129.63a as a section with which a person may demonstrate compliance by an alternative method that meets all of the requirements specified in § 129.51. This amendment provides owners and operators with flexibility to achieve equivalent VOC emission reductions within a facility. No changes were made from proposed to final in response to this comment.

Please see the response to Comment 8 for the discussion of alternative solvent wiping solutions in battery cleaning operations.

**10. Comment:** The EPA commented that DEP must further justify the exceptions in § 129.63a(c)(2), as these exceptions do not follow the recommendations in the applicable CTG. The IRRC shared the EPA's concerns and incorporated them into IRRC's comments. (2, 8)

**Response:** The Department believes that the exceptions in § 129.63a(c)(2) are consistent with the EPA's recommendations in the 2006 ICS CTG. For example, on pages 8 and 9 of the 2006 ICS CTG, the EPA recommends that States exclude from applicability those cleaning operations associated with product categories that the EPA has listed for regulation under section 183(e) of the CAA, as well as categories of cleaning operations that are specifically excluded from applicability in California's Bay Area Regulation 8 rule 4. The EPA provided the Bay Area exclusions in the CTG as examples for consideration by State and local agencies. States can adopt the recommendations in the 2006 ICS CTG and include them in their SIP revisions or adopt RACT regulations that provide for different approaches. For example, a State may offer the flexibility of requiring only work practices for a given industrial sector or cleaning operation when appropriate. See 2006 ICS CTG at p. 7.

The Department proposed the exceptions in § 129.63a(c)(2) to provide different approaches in specified situations in which achieving the VOC content limits recommended by the 2006 ICS CTG was found not to be technically feasible. During development of the proposed rulemaking, the Department briefed the Air Quality Technical Advisory Committee (AQTAC) on the draft proposed Annex A on February 20, 2014. AQTAC concerns included a request to add exemptions and exceptions for feasibility and technical concerns for specialty industries. After consideration of the comments and concerns discussed at the February 20, 2014, AQTAC meeting and further research on the requirements of other States' regulations, the Department revised the draft proposed Annex A and presented it to AQTAC for a second time on February 11, 2016. The revisions included an exemption in § 129.63a(c)(2)(i) 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. Likewise, due to feasibility concerns, the revisions included an exemption in § 129.63a(c)(2)(ii) for an industrial cleaning solvent used or applied for the cleaning of screen printing equipment that has an as applied VOC content that does not exceed 4.2 lb VOC/gal (500 g VOC/l) of industrial cleaning solvent. See 47 Pa.B. 3356, 3360. These approaches were also proposed during development of industrial cleaning solvents regulations in other States. Importantly, the EPA has approved those States' SIP revisions containing these approaches.

Additionally, the Department added a clarifying amendment to § 129.63a(c)(2), described in the response to Comment 13, below.

### **Exception (i) - Federal Agency Requirements**

The Department determined that Federal rules and requirements or Federal agency mandates that require the use of specific cleaning solvents are in place to protect public health and safety. Requesting Federal agencies to replace their rules or requirements would necessitate having long lead times for the Federal agencies to develop, test, and approve new cleaning solvents. The Department proposed the exception in § 129.63a(c)(2)(i) pertaining to Federal agency requirements because it determined that meeting the VOC requirements in the proposed rulemaking may not be technically feasible or reasonable when operations must use particular solvents specified by Federal agencies that are acting to protect public health or safety.

A similar concern was expressed when Connecticut developed its industrial cleaning solvent regulation. See comment 18 on Connecticut's proposed rulemaking and Connecticut's response on page 21 of its May 28<sup>th</sup>, 2009, Hearing Report at: [http://www.ct.gov/deep/lib/deep/air/regulations/proposed\\_and\\_reports/ctg\\_hearing\\_report\\_final\\_oct\\_09.pdf](http://www.ct.gov/deep/lib/deep/air/regulations/proposed_and_reports/ctg_hearing_report_final_oct_09.pdf)

The EPA approved the SIP revision containing Connecticut's regulation Section 22a-174-20, "Control of organic compound emissions, loading of gasoline and other volatile organic compounds," subsection (ii), "Industrial solvent cleaning," which included essentially the same exemption as the Department proposed. (79 FR 32873, June 9, 2014). The exemption language in Connecticut's regulation is found under Section 22a-174-20(ii)(3)(A)(viii):

*(A) The requirements of this subsection shall not apply to the use of cleaning solvent as follows: ...*

*(viii) [i]n cleaning, including surface preparation prior to coating, necessary to meet a standard or specification issued or approved by the United States Department of Defense, Federal Aviation Administration or other Federal government entity. Any person claiming exemption pursuant to this clause shall maintain records of the standard or specification[.]*

The argument made for Connecticut's exemption also applies in this Commonwealth. The RACT limitations for cleaning solvents as recommended in the 2006 ICS CTG, when necessary to meet a standard or specification issued or approved by the United States Department of Defense,

Federal Aviation Administration, or other Federal government entity do not appear to be reasonable or fit within the technical feasibility criteria of the CTG.

Major sources of VOC falling under the exception in § 129.63a(c)(2)(i) for the use or application of 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 are still required to meet RACT under the requirements of §§ 129.96—129.100. Sections 129.96—129.100 apply to all major sources of VOC even if the sources are exempted from CTG-related regulations. See 46 Pa.B. 2036 (April 23, 2016). Thus, a case-by-case RACT analysis is required for any major source of VOC emissions even when the source category is exempted in a DEP regulation or when no standards or requirements are established under DEP regulations.

Consequently, the Department retained the exception for the use or application of 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.

### **Exception (ii) - Screen Printing Operations**

The Department considered whether screen printing technology in Pennsylvania differs from screen printing technology in other States and determined that the processes are similar among the States. Consequently, the Department exempted screen printing operations from the VOC limits of this rulemaking and provided a VOC limit consistent with what the EPA has approved as RACT for other States.

Recommendations and approvals made by the EPA in support of regulations of nearby States support Pennsylvania's exception in § 129.63a(c)(2)(ii). For example, EPA Region II appears to have made a recommendation to New Jersey in 2017, as indicated on page 29 of New Jersey's November 6, 2017, final regulation adoption document found at: [http://www.nj.gov/dep/rules/adoptions/adopt\\_20171106a.pdf](http://www.nj.gov/dep/rules/adoptions/adopt_20171106a.pdf)

When analyzing Federal standards as part of its ICS VOC RACT rulemaking, the New Jersey Department of Environmental Protection wrote:

*Based on stakeholder input, as discussed in the notice of proposal, the Department did not follow the ICS CTG recommendation to exclude all graphic arts printing and coating operations from the recommended VOC content limits for the cleaning solvents used in the industrial cleaning process. The Department excluded all graphic arts printing and coating operations, except screen printing, which makes the new requirement for screen printing operations at N.J.A.C. 7:27-16.24(c) more stringent than the Federal requirements. The Department based this exception on the EPA's recommendation that States consult Connecticut's ICS CTG rule (R.C.S.A. 22a-174-20(ii)(3)(C)) and on stakeholder comments that compliant solvents are readily available and are being used. As discussed in the notice of proposal Economic Impact, cleaning solvents that meet the proposed 500 g/l limit are readily available and companies that switch to compliant solvents, if they have not already done so, will not be subject to any additional burden.*

Consistent with EPA Region II's recommendation for New Jersey to evaluate the Connecticut regulation, the Department consulted the Connecticut regulation, and for the same reasons as those identified by the Specialty Graphic Imaging Association (SGIA) during the public comment period for Connecticut's rulemaking, the Department determined that the alternative VOC content limits provided in the exception in the Department's final-form rulemaking represent RACT for this industry in Pennsylvania. See page 28 of the Connecticut hearing report found at:

[http://www.ct.gov/deep/lib/deep/air/regulations/proposed\\_and\\_reports/ctg\\_hearing\\_report\\_final\\_oct\\_09.pdf](http://www.ct.gov/deep/lib/deep/air/regulations/proposed_and_reports/ctg_hearing_report_final_oct_09.pdf)

The EPA has also acknowledged this approach by approving SIP revisions for Connecticut, Ohio, Indiana, and the District of Columbia. Notably, EPA Region III approved a *full* exemption for screen printing operations included in Subsection 770.9 of the District of Columbia's "Miscellaneous Industrial Solvent Cleaning Operations" regulation when EPA Region III approved the SIP revision for the regulation on April 29, 2013 (78 FR 24992). Subsection 770.9 of the District of Columbia regulation (20 DCMR § 770.9) states:

*770.1 through 770.8 [substantive requirements] shall not apply on or after January 1, 2012, to any person who owns, operates, or leases: ... (p) Cleaning and surface preparation operations related to screen printing[.]*

The SGIA provided testimony and commented on the Department's proposed ICS rulemaking as the SGIA did in other States, indicating that Pennsylvania's proposed standard is RACT for the industry. The SGIA has represented that 4.2 lb VOC/gal (500 g VOC/l) is RACT and that this standard has been adopted as RACT in various States. Screen printing technology in this Commonwealth is no different than screen printing technology in these other States. The SGIA asked DEP to review their comments on other States' rulemakings and consider the standards adopted as RACT in those States. DEP did this and then, accordingly, exempted screen printing processes from the VOC limit and vapor pressure requirements in DEP's rulemaking and applied an alternative standard of 4.2 pounds of VOC per gallon (*500 grams of VOC per liter (g VOC/l)*) as the VOC content standard. The SGIA's comments on Pennsylvania's proposed rulemaking indicate that 4.2 pounds of VOC per gallon (*500 grams of VOC per liter (g VOC/l)*) is still RACT. The SGIA's comment letter on Connecticut's cleaning solvent rule can be found at:

[http://www.ct.gov/deep/lib/deep/air/regulations/comments\\_other/ctg/comments\\_on\\_general\\_solvent\\_cleaning\\_proposal.pdf](http://www.ct.gov/deep/lib/deep/air/regulations/comments_other/ctg/comments_on_general_solvent_cleaning_proposal.pdf)

SGIA's testimony and comments on Pennsylvania's Industrial Cleaning Solvents rule can be found at:

<http://www.ahs.dep.pa.gov/eComment/ViewComments.aspx?enc=8YWIeHIdijzUAfiG53EkjWUbFbNHlt2STxUAwmDbHpY%3d>

Consequently, based on recommendations and approvals made by the EPA, and given the support of the SGIA, the Department made no changes from proposed to final-form rulemaking for § 129.63a(c)(2)(ii).

**11. Comment:** A commentator concurred with the Department’s proposed language in § 129.63a(c) listing digital printing as an exempt category. Including digital printing in this exemption aligns the Commonwealth’s proposed rulemaking with other States – most notably Connecticut and Ohio. (3)

**Response:** The Department thanks the commentator for their support of this rulemaking.

### **§ 129.63a(b) Definitions**

**12. Comment:** The EPA expressed concern that the definition provided in § 129.63a(b) for "industrial cleaning solvent" is poorly worded and should be revised to be consistent with the applicable CTG document. The EPA recommended that DEP consider the State of Georgia's definition of "industrial cleaning solvent" in its regulation 391-3-1.02(2)(aaaa) and page 3-1 of the 2006 ICS CTG that includes a more detailed discussion for each activity. The IRRC shared the EPA’s concerns and incorporated them into IRRC’s comments. (2, 8)

**Response:** The Department thanks the commentators for the recommendation. The Department considered the State of Georgia’s definition as well as other States’ definitions when defining the term “industrial cleaning solvent” for the final-form rulemaking. As a result, the Department amended the final-form definition as “a product formulated with one or more regulated VOCs that is used in a cleaning activity for a cleaning unit operation.”

**13. Comment:** The EPA commented that DEP must revise the regulation to clarify the term "noncompliant industrial cleaning solvent" used to describe the exemptions in § 129.63a(c)(2). The EPA recommends adding either a definition for this term in § 129.63a(b) or a clarifying statement as part of § 129.63a(c)(2) for this purpose. The IRRC shared the EPA’s concerns and incorporated them into IRRC’s comments. (2, 8)

**Response:** The Department has removed the term “noncomplying” from § 129.63a(c)(2) to address the commentators’ concerns. The Department has amended § 129.63a(c)(2) to read as follows in the final-form rulemaking:

(2) The VOC emission limitations in subsection (e) do not apply to the use or application of ~~a noncomplying~~ **AN** industrial cleaning solvent by the owner or operator of a cleaning unit operation at a facility subject to subsection (a) under either of 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).

No amendments were made to § 129.63a(b) in response to this comment.

**14. Comment:** The EPA recommended adding to the regulation a description or definition for each of the cleaning activities that is listed under the definition of “cleaning unit operation,” consistent with Appendix C of EPA’s CTG for Industrial Cleaning Solvents (EPA-453/R06-0012006/09). The IRRC shared the EPA’s concerns and incorporated them into IRRC’s comments. (2, 8)

**Response:** The Department has amended the final-form rulemaking to add a description for each of the cleaning activities. The Department’s descriptions of cleaning activities under the definition of “cleaning unit operation” are consistent with the descriptions of those cleaning activities in Appendix C of the 2006 ICS CTG. The Department notes that the cleaning activities “large manufactured components cleaning” and “small manufactured components cleaning” have been combined in this final-form rulemaking as one cleaning activity: “manufactured components cleaning.” This change is made to streamline the compliance and enforcement of the activity “manufactured components cleaning” because the terms “large” and “small” may be subjective and ambiguous to the regulated community. The EPA did not provide a precise measure in the 2006 ICS CTG to differentiate between a large manufactured component and a small manufactured component. See 2006 ICS CTG, p. C-8.

### **Recordkeeping and Monitoring**

**15. Comment:** The EPA recommended moving the provisions in § 129.63a(h), regarding the method to estimate the composite vapor pressure, from the recordkeeping requirements portion of the regulation to the compliance demonstration requirements in § 129.63a(g) to have all the compliance requirements together. The IRRC shared the EPA’s concerns and incorporated them into IRRC’s comments. (2, 8)

**Response:** Though the commentator indicates that the method to estimate composite vapor pressure is in § 129.63a(h), the methods to estimate composite vapor pressure were specified in §§ 129.63a(i) (relating to composite vapor pressure) and (j) (relating to vapor pressure of single component compound) in the proposed rulemaking. The methods to estimate composite vapor pressure are not compliance demonstration requirements; rather, they are methods to follow to meet the compliance demonstration requirements of § 129.63a(g). For this reason, the proposed rulemaking incorporated both subsections (i) and (j) into the compliance demonstration requirements of subsection (g) by cross-reference in subsection (g)(3). Since the proposed rulemaking already appears to satisfy the concern expressed by the commentator, no changes have been made from proposed to final-form rulemaking in response to this comment.

**16. Comment:** The EPA commented that DEP should provide specific monitoring requirements for the operation of a capture system and add-on air pollution control device to

ensure adequate compliance with the control requirements in § 129.63a(e)(2). The IRRC shared the EPA's concerns and incorporated them into IRRC's comments. (2, 8)

**Response:** The Department did not amend the proposed rulemaking to provide specific monitoring requirements for the operation of a capture system and add-on air pollution control device. The monitoring requirements will be determined on a case-by-case basis during the permitting process. Adequate standards already exist in the Department's regulations to guide this determination.

The Department is likely only to know what the specific monitoring requirements should be for a capture system and add-on air pollution control device when the Department reviews an application for, and issues, a plan approval for such a system. Final monitoring requirements would be established as permit conditions in the final operating permit issued for the operation of the capture system and add-on air pollution control device and will require monitoring and recordkeeping sufficient to demonstrate compliance with the applicable limitation or control requirement.

The requirements of the Department's existing equivalency regulation in § 129.51 must be met by owners or operators that comply with the industrial cleaning solvents regulation using a capture system and add-on air pollution control device under § 129.63a(e)(2). Under § 129.51, the weight of VOCs emitted to the atmosphere from cleaning unit operation cleaning activities is reduced through the use of vapor recovery, incineration or another method that is acceptable under § 129.51(a). The overall emission reductions of a control system in Pennsylvania are determined by the test methods and procedures specified in 25 Pa. Code Chapter 139 (relating to sampling and testing). The 2006 ICS CTG includes the recommendation that the overall emission reductions of a control system may be no less than 85% of the mass of VOC emissions. The Department ensures that the monitoring requirements are met during the permit review and approval process.

### **Aerospace Manufacturing and Rework Regulation**

**17. Comment:** A commentator suggested that for consistency with the EPA CTG "Control of Volatile Organic Compound Emissions from Coating Operations at Aerospace Manufacturing and Rework Operations," EPA-453/R-97-004, December 1997, Pennsylvania raise the Sealant (Extrudable/Rollable/Brushable) limit of 240 g/l to 280 g/l and remove the Self-Priming Topcoat limit (420 g/l) from the table of standards in § 129.73(3). (7)

**Response:** The commentator's suggested changes to the VOC limits in Table II (relating to allowable content of VOCs in aerospace coatings) of § 129.73 are beyond the scope of the proposed rulemaking. The proposed rulemaking amended Table II only to correct an administrative numbering error. The coating type "high-temperature coating" was numbered incorrectly as (20)(a). DEP proposed to renumber it as (21) and to renumber the succeeding coating types accordingly. The title of Table II is proposed to be amended to delete the redundant phrase "allowable VOC content." No substantive amendments were proposed to this section. No changes were made from proposed to final in response to this comment.

**Additional RACT Requirements for Major Sources of NO<sub>x</sub> and VOCs (§§ 129.96—129.100)**

The EPA commented that DEP is proposing amendments to 25 Pa. Code § 129.96 with the purpose of changing the applicability of all provisions within the RACT 2 Rule (25 Pa. Code §§ 129.96-129.100) to exclude VOC sources subject to 25 Pa. Code §§ 129.52d, 129.52e, and 129.74. The proposed amendments would not retroactively relieve affected VOC sources of the requirements of the RACT 2 Rule, which required for already major nitrogen oxides (NO<sub>x</sub>) and/or VOC sources to comply by January 1, 2017. Because the requirements in 25 Pa. Code §§ 129.52d, 129.52e, and 129.74 would also be effective to date, the EPA commented that DEP must specify what RACT should be for those VOC sources subject to both of these requirements. The EPA's specific comments are addressed below in comments 18-21.

**18. Comment:** The EPA understands that DEP's intention in amending § 129.96 is to relieve affected sources from complying with more than one RACT requirement. However, any existing major VOC source subject to the RACT 2 Rule in accordance with § 129.96 must already be in compliance with any applicable requirements since January 1, 2017. Particularly, § 129.99(d) required affected VOC sources that are not subject to presumptive requirements in the RACT 2 Rule to submit RACT proposals by October 24, 2016, to establish and comply with source-specific VOC RACT limits or requirements by January 1, 2017. The IRRC shared the EPA's concerns and incorporated them into IRRC's comments. (2, 8)

**Response:** The Department agrees that subsections (a) and (b) were amended in the proposed rulemaking to exclude VOC sources subject to §§ 129.52d, 129.52e, and 129.74 from the applicability of §§ 129.96—129.100. The intention of these proposed amendments to subsections (a) and (b) was to relieve affected sources subject to § 129.52d, § 129.52e, or § 129.74 from having to comply with more than one RACT requirement.

Sections 129.52d and 129.52e were not included in the RACT 2 regulations when §§ 129.96—129.100 were promulgated at 46 Pa.B 2036 (April 23, 2016), because §§ 129.52d and 129.52e had not been promulgated. 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). Although § 129.74 was promulgated at 45 Pa.B. 7127 (December 19, 2015) prior to the promulgation of §§ 129.96—129.100, this was after the close of the public comment period for the RACT 2 proposed rulemaking on June 30, 2014. The substantive change of adding § 129.74 to § 129.96(a) and (b) could not be made during the RACT 2 final-form rulemaking process.

The Department agrees with the comments as they relate to §§ 129.52d and 129.52e and is not making the change to add §§ 129.52d and 129.52e to § 129.96(a). However, the Department notes that there is no retroactive applicability issue with respect to existing sources subject to § 129.74, because the compliance deadline for that regulation was December 19, 2015. See § 129.74(e). Moreover, the EPA approved § 129.74 as a revision to Pennsylvania's SIP on August 17, 2016, and the regulation meets RACT requirements for sources covered by the EPA's CTG for fiberglass boat manufacturing materials. See 81 FR 54744 (August 17, 2016). As a result, the Department has made the change to add § 129.74 to § 129.96(a) and (b).

**19. Comment:** The EPA commented that the proposed amendments to § 129.96 are appropriate for VOC sources subject to §§ 129.52d, 129.52e, and 129.74 that would become subject to the RACT 2 Rule in the future. As specified in § 129.96(b), any new NO<sub>x</sub> or VOC source or any existing NO<sub>x</sub> or VOC source being modified that becomes a major source, will also be subject to the applicable requirements of the RACT 2 Rule. The IRRC shared the EPA's concerns and incorporated them into IRRC's comments. (2, 8)

**Response:** The Department agrees and has made the change to add §§ 129.52d and 129.52e to § 129.96(b). The Department notes that § 129.96(b) includes § 129.63a in the range of §§ 129.54—129.69. Please see the response to Comment 18 for the Department's explanation for adding § 129.74 to § 129.96(a) and (b).

**20. Comment:** The EPA commented that DEP submitted §§ 129.52d, 129.52e, and 129.74 to the EPA for approval into the Pennsylvania SIP to address CTG VOC RACT requirements for different source categories. DEP also submitted the RACT 2 Rule as a SIP revision to address RACT for major sources of NO<sub>x</sub> and VOC. DEP must clarify the RACT level of control that would apply to VOC sources subject to these different sets of RACT requirements, specifying one set of requirements as RACT.

Because DEP is required under § 129.99(c) to act on each RACT proposal received under the RACT 2 Rule, DEP should determine RACT on a case-by-case basis for these affected sources when acting on the individual RACT proposals. DEP should make source-specific RACT determinations for each affected source in light of all applicable control requirements, including CTG RACT requirements such as those in §§ 129.52d, 129.52e, and 129.74. Further, DEP must require for these affected sources RACT controls that are no less stringent than the EPA's corresponding CTG RACT requirements, for these source-specific RACT determinations to be approvable into the SIP. The IRRC shared the EPA's concerns and incorporated them into IRRC's comments. (2, 8)

**Response:** The Department agrees. The RACT level of control that would apply to VOC sources subject to either the RACT 2 regulations or any CTG regulation would be the more stringent set of requirements.

**21. Comment:** The EPA commented that in describing the amendments to § 129.96, the preamble of the proposed rulemaking does not list § 129.63a as a regulation to be excluded. See 45 Pa.B. 3362. If DEP's intention is to exclude CTG RACT sources from the RACT 2 Rule, then DEP should clearly state that in the preamble and include § 129.63a. The IRRC shared the EPA's concerns and incorporated them into IRRC's comments. (2, 8)

**Response:** The Department agrees that the preamble of the proposed rulemaking did not list § 129.63a as a regulation to be excluded. The Department notes that in the proposed rulemaking, § 129.96(a) included § 129.63a in the range of §§ 129.54—129.69. To address the concern raised by the EPA and IRRC of retroactively relieving affected sources subject to § 129.63a from the applicability of §§ 129.96—129.100, the Department is amending final-form § 129.96(a) to exclude § 129.63a. The Department further notes that § 129.96(b) includes § 129.63a in the

range of §§ 129.54—129.69 for affected sources that become subject to §§ 129.96—129.100 in the future. These changes are discussed in the preamble to the final-form rulemaking.