



PINAL COUNTY

Pinal County Air Quality Control District
Ozone Reasonably Available Control Technology (RACT)
Rulemaking – Surface Coating rule (Chapter 5, Article 13)

Notice of Final Rulemaking

Pursuant to A.R.S. §49-471.07

Pinal County Air Quality Control

August 10, 2020

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On August 10, 2020

1. Preamble

- A. The Pinal County Air Quality Control District (PCAQCD), an operating division of Pinal County, proposed that the Board of Supervisors (BOS) adopt or amend certain rules under authority of A.R.S. §§49-479 and 49-480, which respectively authorize the board to adopt rules to control air pollution.

The Clean Air Act Amendments (CAAA) of 1990 required ozone nonattainment areas to implement Reasonably Available Control Technology (RACT) to control Volatile Organic Compounds (VOC) emissions. Pinal County has a small portion in/around the Apache Junction area that's incorporate into the Phoenix metro ozone nonattainment area for the 2008 8-hour ozone National Ambient Air Quality Standards (NAAQS). The Phoenix metro was originally designated a 'Marginal' nonattainment area for the 2008 8-hour ozone NAAQS on July 20, 2012 and required to attain the standard by July 20, 2015. A marginal ozone nonattainment area isn't required to submit an all-encompassing State Implementation Plan (SIP) that higher nonattainment designations carry (i.e. moderate, serious, and severe) and include RACT requirements.

Unfortunately the nonattainment area didn't attain the ozone NAAQS by the July 20, 2015 deadline and was redesignated to a moderate 8-hour ozone nonattainment area (81 FR 26697, May 4, 2016). Thus requiring the nonattainment area to complete a SIP by January 1, 2017 that included RACT rules. As required, PCAQCD conducted an ozone RACT rulemaking in 2016 which culminated in an 11/30/2016 BOS approval of Chapter 5, Article 13 – Surface Coating Operations and subsequent SIP submittal to EPA (via the Arizona Department of Environmental Quality (ADEQ)). The Environmental Protection Agency (EPA) reviewed the submitted surface coating operations rules (Ch. 5, Article 13) and published a Proposed Rule - Partial Approval, Partial Disapproval and Limited Approval, Limited Disapproval in the Federal Register (84 FR 20838, May 13, 2019). The Final Rule was published in the Federal Register on August 9, 2019 (84 FR 39196) and started a sanctions clock. PCAQCD is required to revise the Surface Coating Operations rules and address the approvability issues (covered under this proposed rulemaking) and have EPA approve the revised rules by March 9, 2021.

The adopted amended rules are identified below and include an amendment to §1-1-105 (not to be included with the SIP submittal) with the final step in this rulemaking being the submittal through ADEQ to EPA (and EPA approval) of the adopted rules in Chapter 5, Article 13, Sections 100, 200, 300, 400 and 500 for inclusion in the State Implementation Plan (SIP).

| Section Affected | Rulemaking Action |
|--|--------------------------|
| §1-1-105. SIP List..... | Amend |
| §5-13-100. General..... | Amend |
| §5-13-200. Definitions..... | Amend |
| §5-13-300. Standards..... | Amend |
| §5-13-400. Administrative Requirements | Amend |
| §5-13-500. Monitoring and Records..... | Amend |

B. Those wishing further information regarding any aspect of this rulemaking may contact Scott DiBiase, Pinal County Air Quality, 31 North Pinal St., Building F, Florence, Arizona, 85132, 520-866-6929, scott.dibiase@pinal.gov.

C. The rulemaking process consisted of an initial administrative rule development process, including a combined notice of proposed rulemaking and oral proceeding (posted online April 20, 2020), a 30 day public comment period, a stakeholder meeting held on June 3, 2020, an oral proceeding before the Control Officer or his designee held on June 10, 2020. Written comments were due prior to the close of the comment period, which was the close-of-business on the day of the Oral Proceeding (no comments were received). The final step in the rule adoption process was a public hearing before the Board of Supervisors on August 5, 2020.

D. The adopted rule revisions include the following:

1. Adopted grammatical and numbering corrections/changes throughout Chapter 5, Article 13 (i.e. removal of extra period, comma, updating numbering, etc.) which don't change the meaning or purpose of the rules.
2. Revision of §1-1-105 to include the amend date for Chapter 5, Article 13 rules (sections 100 through 500). §1-1-105 is a list designating which Board approved rules (and their corresponding adoption dates) are to be presented to the Governor of Arizona for transmittal to the Administrator of the EPA with a request that they be included as elements in the Arizona SIP. §1-1-105 is not to be included in the SIP submittal.

Rule Approvability Comments listed in the March 11, 2019 EPA letter from Doris Lo, Manager Rules Office to PCAQCD Director Michael Sundblom:

3. §5-13-100.3 – Partial exemptions. In response to EPA rule approvability issue, propose removal of extreme performance coatings (§5-13-100.3.ii) and tactical military equipment (§5-13-100.3.iv.e) from the partial exemptions section.
4. §5-13-300.1 – Standards. Table 1.
 - a. Removal of the “Clear Coat” coating category and associated coating limits in Table 1 and addition of General One Component, General Multi Component, Silicone Release and Solar Absorbent coating categories and respective coating limits.
 - b. Removal of OTHER METAL PARTS AND PRODUCTS COATING section and associated coating limits.
 - c. Correction to coating limit for Drum Coating, New Exterior Baked from 0.34 g VOC/l to 340 g VOC/l.

5. §5-13-300.5.i – Emission Control System (ECS)
 - a. Addition and removal of language to address the following
 - i. Overall ECS Efficiency of at least 90%.
 - ii. Capture efficiency of at least 90%.
 - iii. Control Techniques Guidelines (CTG) – recommended 90% overall capture and control efficiency.
 - iv. Alternative low VOC limit of 20 mg VOC/m³ (as methane).

Rule Improvement Comments listed in the March 11, 2019 EPA letter from Doris Lo, Manager Rules Office to PCAQCD Director Michael Sundblom:

6. §5-13-200 – Definitions
 - a. Air-Dried Coating: Revision to the air-dried coating definition to correct temperature language.
 - b. Addition of definition for alternative application method
 - c. Baked Coating: Revision to the baked coating definition to correct temperature language.
 - d. Clear Coat: Removal of definition of clear coat (see rule approvability comments in section above).
 - e. Extreme High-Gloss Coating –Correction to outdated and incorrect reference of ASTM D-523-89 (1999).
 - f. Extreme Performance Coating –Removal of original definition language and addition of new language to expand the definition in order to follow the recommended definition in the CTG (Appendix H).
 - g. Multi-Component Coating –Addition of definition due to the addition of the multi-component coating surface coating category in Table 1 (see rule approvability comments in section above).
 - h. Non-Precursor Organic Compounds –Removal of subsection (1) in reference to 40 CFR 51.100(s) in the definition otherwise (s) (1) will exclude t-butyl acetate from being exempt.
 - i. One-Component Coating –Addition of definition due to the addition of the One-Component Coating surface coating category in Table 1 (see rule approvability comments in section above).
 - j. Silicone-Release Coating - Addition of definition due to the addition of the Silicone-Release Coating surface coating category in Table 1 (see rule approvability comments in section above).
 - k. Solar-Absorbant Coating - Addition of definition due to the addition of the Solar-Absorbant Coating surface coating category in Table 1 (see rule approvability comments in section above).
 - l. VOC Actual –Removal of internal rule references (i.e. §5-13-200.12) in the definition and propose removal of “Content of Cleaners or Reducers” and replacement with “Actual” in the VOC Actual equation name.
7. §5-13-300 – Standards
 - a. §5-13-300.1 - Surface Coatings Standards - Addition of labeling language (same language used originally in §5-13-300.5.i.d which was moved to this section – 5-13-300.1.ii) to clarify the ECS requirements.
 - b. Table 1 –Removal of all text at and below OTHER METAL PARTS AND PRODUCTS COATINGS per EPA request.
 - c. Footnote to Table 1 –Addition of clarifying language “*if a coating does not meet a specific coating category definition, then it is assumed to be a general use coating and the VOC limit for “general coating” applies.
 - d. §5-13-300.2 – Application Methods for Surface Coatings
 - i. §5-13-300.2.i.a - Addition of “High Volume” to clarify HVLP Spray-Gun application method.

- ii. §5-13-300.2.i.e –Addition of “An Alternative Application Method” as one of the application methods available for an owner or operator to use.
- iii. §5-13-300.2.ii –Correction to the listed emissions limit – from 250 g/l to 240 g/l. Also propose addition of “VOC Regulatory” language.
- iv. §5-13-300.4.iii –Removal of the word “and” at the end of this particular work practice.
- v. §5-13-300.4.v –Removal and replacement language to align with the 2008 CTG for work practices for cleaning materials.
- vi. §5-13-300.5.i. –Addition and removal of language to clarify how to determine the control and capture efficiencies of an ECS for an owner or operator who chooses to use an ECS instead of the surface coating limits listed in Table 1 (§5-13-300).
- vii. §5-13-300.5.i.b –Addition of language for clarifying how capture efficiency is determined, including citations to an EPA Guidelines document and Code of Federal Regulations (CFR) methods.
- viii. §5-13-300.5.i.c –Addition of language for clarifying how control efficiency is determined, including citations to EPA methods.
- ix. §5-13-300.5.v.4 –Addition of referenced section (§5-13-500.3) to the information required as part of an Operation and Maintenance (O&M) Plan.
- x. §5-13-400.2 –Addition of language for when after the rule revision is adopted by the BOS are O&M Plans for ECS equipment due per EPA request.
- xi. §5-13-500.1.b –Addition of “or” between owner operator and a correction of VOC coating to VOC content.
- xii. §5-13-500.4.a.1 –Revision to the date associated with BAAQMD Method 31 from April 15, 1992 to May 18, 2015.
- xiii. §5-13-500.4.a.2.b –Removal of the subsection (EPA Method 24 modification language) entirely per request of EPA.
- xiv. §5-13-500.4.i.b –Removal of Method 25 submethod language as Method 25 (grab sample, send to lab to analyze) and method 25a (on-site instrumental analyzer) are different methods.
- xv. §5-13-500.4.i.c –Removal of ambiguous internal and external references language and replace with specific reference to EPA Guidelines and methods.
- xvi. §5-13-500.4.i.f –Addition of a South Coast Air Quality Management District test method for transfer efficiency of an alternative coating application.
- xvii. §5-13-500.4.ii – Updated CFR date from July 1, 2015 to July 1, 2019.
- xviii. §5-13-500.4.ii.b –Removal of EPA Method 18 submethods since Method 18 has no submethods.
- xix. §5-13-500.4.ii.d –Removal of EPA Method 25 generic submethods language and addition of specific EPA Method 25 submethods (25a and 25b).
- xx. §5-13-500.4.iii –Removal of ambiguous internal references and addition of reference language to the appropriate section (§5-13-300(5)).
- xxi. §5-13-500.4.iii.a –Removal of EPA Method 18 submethods language (no submethods for Method 18) along with Method 25 submethods since method 25 and 25a are different methods.

- xxii. §5-13-500.4.iii.c –Correction to the language referencing EPA methods used for determining ventilation/draft rates. Propose removal of “and” and replacement with “or” for EPA methods 2, 2a, 2c or 2d.

- E. A reference to any study relevant to the rule that the agency reviewed and either relied on in its evaluation of or justification for the rule or did not rely on in its evaluation of or justification for the rule, where the public may obtain or review each study (See contact information in subsection B above), all data underlying each study, and any analysis of each study and other supporting material.

Control Techniques Guidelines for Miscellaneous Metal and Plastic Parts Coatings, EPA-453/R-08-003, September 2008.

EPA Final Rule – Partial Approval, Partial Disapproval and Limited Approval, Limited Disapproval of Arizona Air Plan Revisions; Pinal County Air Quality Control District (84 FR 39196, August 9, 2019). Docket No. EPA-R09-OAR-2019-0159.

TSD Reviewing Pinal RACT SIP, March 2019 – prepared by Stanley Tong – EPA-R09-OAR-2019-0159-0020.

EPA letter from Doris Lo, Manager, Rules Office, Air Division, EPA Region 9, dated March 11, 2019 to Michael Sundblom, Director, Pinal County Air Quality Control District. RE: EPA Comments on the Pinal County Air Quality Control District Reasonably Available Control Technology (RACT) Analysis, Negative Declaration and Rules Adoption.

- F. Economic, small business and consumer impact statement

The following discussion addresses each of the elements required for an economic, small business and consumer impact state under A.R.S. §41-1055.

This rulemaking adopted amendments to Chapter 5, Article 13. Surface coating operations in the Pinal County portion of the Phoenix-Mesa 8-hour ozone nonattainment area.

One surface coating operation Rolling plains (formally Arizona Steel) may be affected by this rulemaking. The department has issued permits to Rolling plains since 2003 and the facility will continue to be subject to the amended Chapter 5, Article 13 rule. Since Rolling Plains has been located in the ozone nonattainment area for over a decade, the permit requirements have been rather restrictive and the equipment and business practices are similar in nature to the adopted RACT rules. Therefore minimal impacts are expected.

The probable costs to the implementing agency (Pinal County Air Quality) will be minimal since the department already conducts regular inspections of Rolling plains in order to verify compliance with their permit requirements.

- G. The adopted changes took effect on August 5, 2020.

- H. Compliance with the Fee-limitations of A.R.S. §49-112 (A) or (B).

Based on information and belief, the Director of the Pinal County Air Quality Control District affirms the following:

Initially, the total of the fees and other charges currently assessed in connection with the administration of the County's air quality program do not now equal the cost of program administration. To the extent that both the County and ADEQ impose parallel fees, the County's fees are capped by rule at ADEQ's rates, which implicitly affirms that the County's fees are reasonable. To the extent the County's program affects certain sources that ADEQ

either does not regulate or does not charge, these changes do not impose any additional fees on those sources at this time.

- I. Persons may obtain a full copy of the adopted rules or existing rules at:
Pinal County Air Quality Control District
31 North Pinal St., Building F.
P.O. Box 987
Florence, AZ. 85132

<http://www.pinalcountyz.gov/AirQuality/Pages/home.aspx>

- J. A list of all previous notices related to this rulemaking:

Combined Notice of Proposed Rulemaking and Oral Proceeding – posted online April 20, 2020 (<https://www.pinalcountyz.gov/AirQuality/Pages/CurrentRulemaking3.aspx>).

2. The full text of the changes follows:

1-1-105. SIP list

- A. As a declaration of Board policy rather than a rule, and subject to the limitations of paragraphs B. and C. of this section, the Board of Supervisors expressly designates the following list of sections within this Code, to be presented to the Governor of Arizona for transmittal to the Administrator of the EPA with a request that they be included as elements in the Arizona SIP:
 1. Chapter 1
 - a. Article 1.(As amended 5/14/97 and 5/27/98), except for §§1-1-105 and 1-1-107.
 - b. Article 2 (As amended 5/14/97 and 7/12/00) except for §1-2-110.
 - c. Article 3. (As amended 5/14/97, 5/27/98 and 10/27/04, 07/23/14, except for §1-3-130 and the definition in §1-3-140.82 (10/12/95) of "maximum achievable control technology.")
 2. Chapter 2
 - a. Article 1. (As amended 10/12/95).
 - b. Article 2. (As amended 5/14/97), excluding:
 - i. §2-2-090 (as amended 5/14/97)
 - c. Article 3. (As amended 10/12/95).
 - d. Article 4. (As amended 10/12/95).
 - e. Article 5. (As amended 10/12/95).
 - f. Article 6. (As amended 10/12/95).
 - g. Article 7. (As amended 10/12/95).
 - h. Article 8. (As amended 5/18/05, as amended 1/7/09).
 3. Chapter 3
 - a. Article 1. (As amended 5/14/97, and 5/27/98 and 7/12/00), excluding:

- i. §3-1-020
 - ii. §3-1-045
 - iii. §3-1-080
 - iv. §3-1-100
 - v. §3-1-150 (as amended 5/14/97)
 - vi. §3-1-160 (as amended 5/14/97)
 - vii. §3-1-170 (as amended 5/14/97)
 - viii. §3-1-173 (as amended 5/14/97)
 - b. Article 2. (As amended 10/12/95, 5/27/98 and 7/29/98).
 - c. Article 3. (As amended 10/12/95, 5/27/15).
 - d. Article 8. (As amended 10/12/95 and 10/27/04).
4. Chapter 4
- a. Article 1. (As amended 2/22/95).
 - b. Article 2. (As amended 5/14/97, 7/12/00, 12/4/02 and 10/27/04).
 - c. Article 3, limited to:
 - i. §4-3-160 (As amended 10/28/15)
 - ii. §4-3-170 (As amended 10/28/15)
 - iii. §4-3-180 (As amended 10/28/15)
 - iv. §4-3-190 (As amended 10/28/15)
 - d. Article 4 (As amended 6/3/09).
 - e. Article 5 (As amended 6/3/09).
 - f. Reserved.
 - g. Article 7 (As amended 6/3/09)
 - h. Reserved.
 - i. Article 9, limited to:
 - i. §4-9-320 (As amended 6/3/09)
 - ii. §4-9-340 (As amended 6/3/09)
5. Chapter 5
- a. Article 13. (as amended ~~11/30/16~~ ##/##/20), excluding
 - i. §5-13-390 (as amended 10/12/95)
 - a. Article 20. (as amended 11/30/16)
- B. Notwithstanding the approval as elements of the SIP of those provisions of the Code identified in paragraph A of this section, those provisions, save §3-1-084 which shall be expressly exempted from the limitation of this paragraph, shall operate as elements of the SIP only insofar as they pertain to:
- 1. "construction," as defined in Nov. '93 Code §1-3-140.28; or
 - 2. "modification," as defined in Nov. '93 Code §1-3-140.85; and
- C. Notwithstanding the approval as elements of the SIP of those provisions of the Code identified in paragraph A of this section, neither those provisions nor any permit conditions imposed pursuant to those provisions shall:
- 1. Operate as elements of the SIP insofar as they pertain to other than "conventional pollutants," as defined in §1-3-140.33;

2. Operate as elements of the SIP insofar as they pertain only to a requirement arising under, or pertain to a source subject to regulation exclusively by virtue of a requirement arising under:
 - a. §111 of the Clean Air Act; or
 - b. Title IV of the 1990 amendments to the Clean Air Act; or
 - c. Title VI of the 1990 amendments to the Clean Air Act; or
 - d. Any section of this Code that is not a part of the SIP;
 3. Operate as an element of the SIP, at least insofar as they impose a "fee";
 4. Operate as an element of the SIP, at least insofar as they require a "certification";
 5. Operate as an element of the SIP, at least insofar as they impose obligations pertaining to "renewals";
 6. Operate as an element of the SIP, at least insofar as they impose requirements regarding "excess emissions"; or
 7. Operate as an element of the SIP, at least insofar as they impose requirements regarding "compliance plans."
- D. As a renumbering and reconciliation of previously approved SIP provisions as elements of this Code, the Board of Supervisors additionally designates the following list of sections within this Code, to be presented to the Governor of Arizona for transmittal to the Administrator of the EPA with a request that they be included as elements in the Arizona SIP without operational limitation:
1. §§1-1-010.C (2/22/95) and 1-1-010.D (2/22/95) *Declaration of Policy*
 2. Chapter 2, Article 8 (As amended 1/7/09) *Visibility Limiting Standard*
 3. Chapter 3, Article 8 (2/22/95) *Open Burning*
 4. [Reserved]
 5. [Reserved]
 6. [Reserved]
 7. [Reserved]
 8. [Reserved]
 9. [Reserved]
 10. [Reserved]
 11. [Reserved]
 12. §5-18-740 (2/22/95) *Storage of Organic Compounds - Organic Compound Emissions*
 13. §5-19-800 (2/22/95) *Loading of Volatile Organic Compounds - Organic Compound Emissions*
 16. §5-22-950 (2/22/95) *Fossil Fuel Fired Steam Generator Standard Applicability*
 17. §5-22-960 (2/22/95) *Fossil Fuel Fired Steam Generator Sulfur Dioxide Emission Limitation*
 18. §5-24-1030.F (2/22/95) *Generally Applicable Federally Enforceable Minimum Standard of Performance - Organic Compound Emissions*

19. §5-24-1030.I (2/22/95) *Generally Applicable Federally Enforceable Minimum Standard of Performance - Carbon Monoxide*
20. §5-24-1032 (2/22/95) *Federally Enforceable Minimum Standard of Performance - Process Particulate Emissions*
21. §5-24-1040 (2/22/95) *Carbon Monoxide Emissions - Industrial Processes*
22. §5-24-1045 (2/22/95) *Sulfite Pulp Mills - Sulfur Compound Emissions*
23. §5-24-1050 (2/22/95, as amended June 20, 1996) *Reduced Sulfur Emissions - Default Limitation*
24. §5-24-1055 (2/22/95) *Pumps and Compressors - Organic Compound Emissions*

ARTICLE 13. SURFACE COATING OPERATIONS

5-13-100 – GENERAL

1. **PURPOSE:** To limit the emission of volatile organic compounds (VOCs) from surface coating operations in the Pinal County portion of the Phoenix metro 8-hour ozone nonattainment area (2008 ozone National Ambient Air Quality Standard (NAAQS)), defined in 40 CFR 81.303.
2. **APPLICABILITY:** This rule applies to surface coating operations in the Pinal County portion of the Phoenix metro 8-hour ozone nonattainment area for the 2008 ozone NAAQS, namely T1N, R8E; T1S, R8E (Sections 1 through 12) where the total actual VOC emissions from all operations, including related cleaning activities, at the facility are equal to or exceed 15 lbs/day or an equivalent 2.7 tons per year, before consideration of controls.

Additionally:

- i. Surface-coating activities regulated under this rule include, but are not limited to, the application of coating, coating preparation/mixing at the facility applying the coating, and the cleanup of coating application equipment.
 - ii. §5-13-100.3 sets forth partial exemptions for certain materials or uses employed by a surface coating operation subject to this rule.
 - iii. In addition to this rule, facilities may be subject to New Source Performance Standards (NSPS) in Chapter 6 and/or to National Emission Standards for Hazardous Air Pollutants (NESHAP) in Chapter 7 of these regulations.
3. **PARTIAL EXEMPTIONS:**
 - i. **Qualified Materials Exemption:**
 - a. **Leak-Preventing Materials:** Sealants, caulking, and similar materials used on the following substrates for the primary purpose of leak prevention are exempt from this rule:
 - (1) Non-metallic substrates; and
 - (2) Post manufacture, such as, but not limited to, old joints and seals on pipe and valve assemblies.

- b. Certain Joint Fillers: Caulking and beaded sealants used to fill gaps or to fill joints between surfaces are exempt from this rule, except those used in manufacturing other metal parts and products or in the manufacturing of cans.
- ~~ii. Extreme Performance Coatings: Extreme performance coatings are exempt from the VOC limits in Table 1 of this rule but not from any other sections of this rule when used under the following conditions:~~
 - ~~a. Used on internal combustion engine components that are normally above 250°F (121°C) during use; or~~
 - ~~b. Used at temperatures above 250°F (121°C) on items that are both included under the North American Industry Classifications System (NAICS) codes 334210, 334220, 334290, 334416, 334417, 334418, 334419, 334310 or 336419 and are electronic products in space vehicles and/or are communications equipment.~~
- ~~iii.~~ Application Methods Exemptions: The following coatings are exempt from application methods in §5-13-300.2 of this rule but are subject to the remaining provisions of this rule:
 - a. Metal part texture coatings;
 - b. Metal part touch-up and repair coatings;
- ~~iv.~~ Application Methods and VOC-Limit Exemptions: The following surface coating operations are exempt from §§5-13-300.1(surface coating standards), 5-13-300.2 (Application methods), and 5-13-300.5 (Emission control system requirements) of this rule but shall comply with §§5-13-300.3 (Cleanup of application equipment), 5-13-300.4 (Work practices-handling, disposal and storage of VOC-Containing material), and 5-13-500 (Monitoring & Records) of this rule.
 - a. Aerosol can spray coating from a non-refillable container that is less than 22 fluid ounces (0.66 liter) capacity without exceeding 2 ton/yr VOC usage or purchase, facility wide threshold.
 - b. Low usage of VOC coatings which exceed thresholds for coating categories listed in Table 1 of this Rule, which in aggregate of all formulations do not exceed 55 gal/yr (208 liters) facility-wide. The operator shall update usage records of these coatings at the end of each month of their use, pursuant to §5-13-500(1)(ii) of this rule.
 - c. A Small Surface-Coating Source
 - d. This rule is not applicable to coatings or solvents having a VOC content, minus exempt compounds, of less than 0.15 lb VOC/gal (18g/L).
 - ~~e. A tactical military equipment coating that is approved in a Pinal County Air Pollution Permit subsequent to a sufficient demonstration by the user that no compliant substitute exists.~~
 - f. Metal Parts Coating:
 - (1) Stencil coatings.
 - (2) Safety-indicating coatings.
 - (3) Solid-film lubricants.
 - (4) Electric-insulating and thermal-conducting coatings.

(5) Magnetic data storage disk coatings.

(6) Plastic extruded onto metal parts to form a coating.

iv. Low Usage Allowance for Restricted Spray Guns: Spray guns otherwise prohibited by §5-13-300.2 of this rule for use with coatings over 2 lbs VOC/gal minus exempt compounds, are exempt from this rule under the following limited conditions:

- a. If VOC emissions from the finishing application are captured and directed to an ECS complying with the provisions of §5-13-300.5 of this rule; or
- b. To coat the inside of pipes and tubes with a wand-style applicator; or
- c. Using an airbrush or other small gun that has a reservoir capacity not exceeding 250 cc (8.8 fl. oz) and is used solely for detailing, lettering, touchup, and/or repair.

4. TOTAL CATEGORICAL EXEMPTIONS: This rule does not apply to the following operations:

- i. Solvent cleaning (Chapter 5, Article 15).

5-13-200 – DEFINITIONS:

For the purpose of this rule, the following definitions shall apply, in addition to those definitions found in §1-3-140 (Definitions) of these rules. In the event of any inconsistency between any of the Pinal County Air Quality Control District Code of Regulations, the definitions in this rule take precedence.

1. ADHESIVE: A material used for the primary purpose of bonding two or more surfaces together.
2. ADHESIVE PRIMER: A coating applied to a substrate, prior to the application of an adhesive, to provide a bonding surface.
3. AEROSOL CAN-SPRAY COATING: A coating sold in a hand-held, pressurized, non-refillable container, of less than 22 fluid ounces (0.66 liter) capacity, and that is expelled from the container in a finely divided form when a valve on the container is depressed.
4. AIR-DRIED COATING: A coating dried by the use of air or forced warm air at temperatures ~~up to and including 200~~ below 194° F (93.390° C).
5. ALTERNATIVE APPLICATION METHOD: Any method approved by the Administrator as HVLP-equivalent.
56. BAKED COATING: A coating that is dried or cured in an oven in which the oven temperature ~~exceeds 200~~ at or above 194° F (93.390° C).
67. CAMOUFLAGE: A coating used, principally by the military, to conceal equipment from detection.
78. CAULKING: A semisolid material that is used to aerodynamically smooth surfaces or fill cavities.
8. ~~CLEAR COAT: A coating that lacks color or opacity or is transparent.~~
9. COATING APPLICATION EQUIPMENT: Any spray gun, wand, rollers, brushes or any other means used to apply or cover a surface with a coating for either beauty, protection or other purpose.
10. DAY: A period of 24 consecutive hours beginning at midnight.

11. DRUM COATING: Coating of a cylindrical metal shipping container larger than 12 gallons capacity but no larger than 110 gallons capacity.
12. ELECTRIC INSULATING VARNISH: A non-convertible-type coating applied to electric motors, components of electric motors, or power transformers, to provide electrical, mechanical, and environmental protection or resistance.
13. ELECTROSTATIC SYSTEM: A method of applying atomized paint by electrically charging the coating and the object being coated with opposing charges. A higher proportion of the coating reaches and coats the object than would occur in the absence of a charge.
14. EMISSION CONTROL SYSTEM (ECS): A system, approved in writing by the Control Officer, designed and operated in accordance with the equipment manufacturer's specifications, to reduce emissions of volatile organic compounds. Such system consists of an emissions collection subsystem and an emissions processing subsystem.
15. ETCHING FILLER: A coating that contains less than 23 percent solids by weight and at least ½ percent acid by weight, and is used instead of applying a pretreatment coating followed by a primer.
16. EXTREME HIGH-GLOSS COATING: A coating when tested by the ASTM D-523-89 (1999) ~~adopted in 1980~~ shows reflectance of 75 or more on a 60° meter.
17. EXEMPT ORGANIC COMPOUNDS: The federally listed non-precursor organic compounds, organic compounds which have been determined to have negligible photochemical reactivity as listed in 40 CFR 51.100(s).
18. EXTREME-PERFORMANCE COATING: ~~A coating used on a surface where the coated surface in its intended use is at temperatures consistently in excess of 250° F (121° C). Extreme performance coatings include but are not limited to, coatings applied to locomotives, railroad cars, farm machinery, plastic, rubber, leather, or glass. A coating used on a metal or plastic surface where the coated surface is, in its intended use, subject to the following:~~
(A) Chronic exposure to corrosive, caustic or acidic agents, chemicals, chemical fumes, chemical mixtures or solutions; or
(B) Repeated exposure to temperatures in excess of 250° F; or
(C) Repeated heavy abrasion, including mechanical wear and repeated scrubbing with industrial grade solvents, cleansers or scouring agents.
Extreme performance coatings include, but are not limited to, coatings applied to locomotives, railroad cars, farm machinery, and heavy duty trucks.
19. FABRIC: A textile material. Non-manufactured items from nature are not fabric except for natural threads, fibers, filaments, and similar that have been manufactured into textile fabric.
20. FILLER: A relatively non-adhesive substance added to an adhesive to improve its working properties, permanence, strength, or other qualities.
21. FLEXIBLE PLASTIC PART OR PRODUCT: A plastic part or product designed to withstand significant deformation without damaging it for its intended use. Not included are flexible plastic parts that are found on a can, coil, metal furniture, or large appliance, or that are already a part of an aerospace component, highway vehicle, mobile equipment, architectural building or structure, or a previously coated marine-vessel .
22. FLOW COAT: A non-atomized technique of applying coatings to a substrate with a fluid nozzle in a fan pattern with no air supplied to the nozzle.

23. **HAND APPLICATION METHODS:** Application of coatings by non-mechanical, hand-held equipment including but not limited to paint brushes, hand rollers, caulking guns, trowels, spatulas, syringe daubers, rags, and sponges.
24. **HEAT-RESISTANT COATING:** A coating that must withstand a temperature of at least 400°F during normal use.
25. **HIGH PERFORMANCE ARCHITECTURAL COATING:** A coating used to protect architectural subsections and that meets the requirements of the Architectural Aluminum Manufacturer Association's publication number AAMA 2604-05 (Voluntary Specification, Performance Requirements and Test Procedures for High Performance Organic Coatings on Aluminum Extrusions and Panels) or 2605-05 (Voluntary Specification, Performance Requirements and Test Procedures for Superior Performing Organic Coatings on Aluminum Extrusions and Panels).
26. **HIGH TEMPERATURE COATING:** A coating that is certified to withstand a temperature of 1000°F for 24 hours.
27. **HIGH-VOLUME, LOW PRESSURE (HVLP) SPRAY-GUN:** Spray equipment that is permanently labeled as such and used to apply any coating by means of a spray-gun which is designed and operated between 0.1 and 10 pounds per square inch gauge (psig) air atomizing pressure measured dynamically at the center of the air cap and at the air horns.
28. **HIGHWAY VEHICLE:** A vehicle that is physically capable of being driven upon a highway including, but not limited to, cars, pickups, vans, trucks, truck-tractors, motor-homes, motorcycles, and utility vehicles.
29. **IN USE OR HANDLED:** Actively engaging the materials with activities such as mixing, depositing, brushing, rolling, padding, wiping or removing or transferring material into or out of the container.
30. **LARGE APPLIANCE:** A door, case, lid, panel, or interior support part of residential and commercial washers, dryers, ranges, refrigerators, freezers, water heaters, dishwashers, trash compactors, air conditioners, evaporative coolers, and other similar products.
31. **LOW PRESSURE SPRAY GUN:** An air-atomized spray gun that, by design, functions best at tip pressures below 10 psig (516 mm Hg), measured according to §5-13-500(4)(i)(d) of this rule, and for which the manufacturer makes no claims to the public that the gun can be used effectively above 12 psig (619 mm Hg).
32. **METAL FURNITURE:** Furniture made of metal or any metal part which will be assembled with other parts made of metal or other material(s) to form a furniture piece.
33. **METALLIC COATING:** A coating that contains more than 5 grams of metal particles per liter of coating as applied.
34. **MILITARY SPECIFICATION COATING:** A coating that has a formulation that has been approved by a United States Military Agency for use on military equipment.
35. **MOBILE EQUIPMENT:** Equipment that is physically capable of being driven or drawn on a highway including, but not limited to: construction vehicles (such as mobile cranes, bulldozers, concrete mixers); farming equipment (wheel tractor, plow, pesticide sprayer); hauling equipment

- (truck trailers, utility bodies, camper shells); and miscellaneous equipment (street cleaners, mopeds, golf carts).
36. MOLD-SEAL COATING: The initial coating applied to a new mold or a repaired mold to provide a smooth surface which, when coated with a mold release coating, prevents products from sticking to the mold.
37. MULTI-COMPONENT COATING: A coating requiring the addition of a separate reactive resin, commonly known as a catalyst or hardener, before application to form an acceptable dry film.
3738. NON-PRECURSOR ORGANIC COMPOUNDS: Non-Precursor Organic Compounds are compounds having negligible photochemical reactivity. The list of negligible photochemical reactivity compounds is provided in 40 CFR 51.100(s)(4).
39. ONE-COMPONENT COATING: A coating that is ready for application as it comes out of its container to form an acceptable dry film. A thinner, necessary to reduce viscosity, is not considered a component.
3840. OTHER METAL PARTS AND PRODUCTS: Any metal part or product, excluding the following items that are made of metal: can, coil, furniture, large appliance, aerospace component, metal foil, metal textile fabric, semiconductor metal, highway vehicle, mobile equipment, an architectural building or structure, a previously coated marine-vessel.
3941. PAN BACKING COATING: A coating applied to the surface of pots, pans, or other cooking implements that are exposed directly to a flame or other heating element.
4042. PLASTIC: Substrates containing one or more resins and may be solid, porous, flexible, or rigid. Plastics include fiber reinforced plastic composites. Any solid, synthetic: resin, polymer, or elastomer, except rubber. For the purposes of this rule, plastic film is considered film; fabric and paper made of polymeric plastic fibers are considered fabric and paper, respectively.
4143. PREFABRICATED ARCHITECTURAL COMPONENT COATING: A coating applied to metal parts and products which are to be used as an architectural structure.
4244. PRETREATMENT COATING: A coating containing no more than 12 percent solids by weight, and at least 1/2 percent acid, by weight, is used to provide surface etching, and is applied directly to metal surfaces to provide corrosion resistance, adhesion and ease of stripping.
4345. PRIMER: A coating applied directly to substrate for any one or combination of the following purposes: corrosion prevention, protection from the environment, functional fluid resistance, or adhesion of subsequent coatings.
4446. REPAIR COATING: A coating used to recoat the portion of a completed finish that suffered post-production damage at the facility where the finish was applied.
4547. RESTRICTED SPRAY GUN: An air-atomizing spray gun that is not a low pressure spray gun, and any other spray gun that is not on the list in §5-13-300.2 of this rule.
4648. SEALANT (BEADED): A material with adhesive properties that is applied as a rope or bead and that is formulated for use primarily to fill, seal, waterproof, or weatherproof gaps or joints between two surfaces. Sealants include sealant primers and caulks.

49. SILICONE-RELEASE COATING: Any coating which contains silicone resin and is intended to prevent food from sticking to metal surfaces such as baking pans.
50. SOLAR-ABSORBANT COATING: A coating which has as its prime purpose the absorption of solar radiation.
4751. SMALL SURFACE COATING SOURCE (SSCS): A facility from which the total VOC emissions for all surface coating operations that are subject to this rule without, or prior to, any emission control, is less than 2 tons/yr (1814 kg); as demonstrated by both adequate records of coating and diluent use (according to §5-13-500.1 of this rule) and a separate tally of the number of days each month such coating operations occur.
4852. STENCIL COATING: An ink or a coating that is rolled or brushed onto a template or stamp in order to add identifying letters, symbols and/or numbers.
4953. SURFACE COATING: A liquid, fluid, or mastic composition that is converted to a solid (or semi-solid) protective, decorative, or adherent film or deposit after application as a thin layer. Surface coating is generally distinct and different from impregnation and from applying adhesive for bonding purposes.
5054. SURFACE COATING OPERATION: Preparation, handling, mixing, and application of surface coating, and cleanup of application equipment and enclosures at a facility where surface coating is applied.
5155. SURFACE PREPARATION: Surface preparation is the cleaning of a substrate to remove dirt, oils, and other contaminants prior to the application of surface coatings or sealants.
5256. TEXTURE COATING: A coating that is applied which, in its finished form, consists of discrete raised spots of the coating.
5357. TOUCH UP COATING: A coating used to cover minor coating imperfections after the main coating operation. This includes touch-up coating that accompanies the purchase of an object already coated with that coating.
5458. TRANSFER EFFICIENCY: The ratio of the weight of coating solids adhering to the part being coated, to the weight of coating solids used in the application process expressed as a percentage.
5559. VACUUM-METALIZING COATING: The undercoat applied to the substrate on which the metal is deposited or the overcoat is applied directly to the metal film. Vacuum metalizing/ physical vapor deposition (PVD) is the process whereby the metal is vaporized and deposited in a substrate in a vacuum chamber.
5660. VOC ACTUAL: VOC Actual includes the VOC Content minus the weight of water and minus the weight of exempt compounds (~~§5-13-200.12~~) divided by the total volume of all materials. Units of VOC actual are in pounds of VOC per gallon (or grams per liter) of material and shall be calculated using the following equation:

$$\text{VOC Actual Content of Cleaners or Reducers} = \frac{W_s - W_w - W_{es}}{V_m}$$

Using consistently either English or metric measures in the calculations, where:

W_s = weight of all volatile material in pounds (or grams) including VOC, water, non-precursor organic compounds (~~§5-13-200.30~~) and dissolved vapors

W_w = weight of water in pounds (or grams)

W_{es} = weight of all non-precursor organic compounds in pounds (or grams)

V_m = volume of total material in gallons (or liters)

5761. VOC CONTENT: The organic chemicals in a material that have a high vapor pressure at ordinary room temperature. The high vapor pressure results from a low boiling point, which causes large numbers of molecules to evaporate or sublimate from the liquid or solid form of the compound and enter the surrounding air. The term VOC Content is a general term used throughout the rule and includes VOC, VOC Actual or VOC Regulatory.

5862. VOC REGULATORY: VOC Content Minus Exempt Compounds The VOC content minus the weight of water and minus the weight of Exempt Compounds divided by the volume of material minus the volume of water and minus the volume of Exempt Compounds. Units of VOC Regulatory are in pounds of VOC per gallon (or grams per liter) of material and shall be calculated using the following equation:

$$\text{VOC Regulatory} = \frac{W_s - W_w - W_{es}}{V_m - V_w - V_{es}}$$

Using consistently either English or metric measures in the calculations, where:

W_s = weight of all volatile material in pounds (or grams), including VOC, water, non-precursor organic compounds and dissolved vapors

W_w = weight of water in pounds (or grams)

W_{es} = weight of all non-precursor organic compounds in pounds (or grams)

V_m = volume of total material in gallons (or liters)

V_w = volume of water in gallons (or liters)

V_{es} = volume of all non-precursor organic compounds in gallons (or liters)

5-13-300 – STANDARDS

1. SURFACE COATINGS: An owner or operator shall comply with one of the following for all applications of surface coatings:
 - i. Meet the limits in Table 1 of this rule. Coating limits are VOC Regulatory; or

- ii. Operate an Emission Control System (ECS) in accordance with §5-13-300.5 of this rule when applying a coating that exceeds the VOC limits in Table 1 of this rule; All VOC coatings used that exceed the VOC limits in Table 1 of this rule shall be clearly labeled such that coating-operators are informed that an ECS must be used during application of surface coatings; or
- iii. Qualify for an exemption under §5-13-100.3 or §5-13-100.4 of this rule.

Table 1: Coating Limits For Metal Parts and Products

| Coating Category | Air Dried | | Baked | |
|---------------------------------------|----------------|----------------|----------------|----------------|
| | g VOC/l | lb VOC/gal | g VOC/l | lb VOC/gal |
| <u>General One Component*</u> | <u>340</u> | <u>2.8</u> | <u>280</u> | <u>2.3</u> |
| <u>General Multi Component*</u> | <u>340</u> | <u>2.8</u> | <u>280</u> | <u>2.3</u> |
| Clear-Coat | 515 | 4.3 | 515 | 4.3 |
| Camouflage | 420 | 3.5 | 420 | 3.5 |
| Electric-Insulating Varnish | 420 | 3.5 | 420 | 3.5 |
| Etching Filler | 420 | 3.5 | 420 | 3.5 |
| Extreme High-Gloss | 420 | 3.5 | 360 | 3.0 |
| Extreme Performance | 420 | 3.5 | 360 | 3.0 |
| Heat-Resistant | 420 | 3.5 | 360 | 3.0 |
| High Performance Architectural | 740 | 6.2 | 740 | 6.2 |
| High Temperature | 420 | 3.5 | 420 | 3.5 |
| Metallic | 420 | 3.5 | 420 | 3.5 |
| Military Specification | 340 | 2.8 | 280 | 2.3 |
| Mold-Seal | 420 | 3.5 | 420 | 3.5 |
| Pan Backing | 420 | 3.5 | 420 | 3.5 |
| Prefabricated Architectural Component | 420 | 3.5 | 280 | 2.3 |
| Pretreatment Coating | 420 | 3.5 | 420 | 3.5 |
| Repair | 420 | 3.5 | 360 | 3.0 |
| <u>Silicone Release</u> | <u>420</u> | <u>3.5</u> | <u>420</u> | <u>3.5</u> |
| <u>Solar-Absorbent</u> | <u>420</u> | <u>3.5</u> | <u>360</u> | <u>3.0</u> |
| Touch up | 420 | 3.5 | 360 | 3.0 |
| Vacuum-Metalizing | 420 | 3.5 | 420 | 3.5 |

| Coating Category | Air Dried | | Baked | |
|---|-----------|------------|---------------------|------------|
| | g VOC/l | lb VOC/gal | g VOC/l | lb VOC/gal |
| Drum Coating, New, Exterior | 340 | 2.8 | 0.34 340 | 2.8 |
| Drum Coating, New, Interior | 420 | 3.5 | 420 | 3.5 |
| Drum Coating, Reconditioned, Exterior | 420 | 3.5 | 420 | 3.5 |
| Drum Coating, Reconditioned, Interior | 500 | 4.2 | 500 | 4.2 |
| | | | | |
| | | | | |
| | | | | |
| OTHER METAL PARTS AND PRODUCTS COATING: includes Adhesive Primer, Caulking, and Beaded Sealants: | | | | |
| Air Dried | 420 | 3.5 | | |
| Baked Coating [above 200°F (93°C)] | | | 360 | 3.0 |

* If a coating does not meet a specific coating category definition, then it is assumed to be a general use coating and the VOC limit for “general coating” applies.

2. APPLICATION METHODS FOR SURFACE COATINGS:

- i. An owner or operator shall use one of the following methods for all applications of surface coating materials containing more than 2 pounds of VOC per gallon (240 g/L), minus exempt compounds, (VOC regulatory):
 - a. HVLP Spray-Gun (High Volume Low Pressure Spray Gun);
 - b. Electrostatic System;
 - c. A system that atomizes principally by hydraulic pressure, including “airless” and “air assisted airless”;
 - d. Hand Application Methods, including but not limited to:
 - (1) Flow Coat;
 - (2) Roll Coat;
 - (3) Dip-Coating;
 - e. An Alternative Application Method
- ii. An owner or operator is allowed to use a device or system other than that described in §5-13-300(2)(i) of this rule for applications of surface coating containing less than 2.0 lb VOC/gal (~~250~~ 240 g/l) (VOC Regulatory).

3. CLEANUP OF APPLICATION EQUIPMENT: An owner or operator shall comply with the following when using VOC-containing material to clean application equipment:

- i. Spray-Gun Cleaning Requirements:
 - a. Clean spray-guns without spraying or atomizing a solvent cleaner with the gun.
 - b. Spray-Gun Cleaning Machine: Use a spray-gun cleaning machine that complies with the following requirements unless the owner or operator complies with the manual spray-gun cleaning requirements in §5-13-300(3)(ii) of this rule.
 - (1) Spray-Gun Cleaning Machine-General Requirements: The spray-gun cleaning machine shall meet all of the following requirements:
 - (a) Be designed to clean spray-guns.
 - (b) Have at least one pump that drives solvent cleaner through and over the spray-gun.
 - (c) Have a basin which permits containment of the solvent cleaner.
 - (d) Be kept in proper repair and free from liquid leaks.
 - (e) Shall be fitted with a cover.
 - (f) Be located on-site where the spray application occurs; and
 - (g) Be operated and maintained according to manufacturer's or distributor's instructions.
 - (2) Automatic Spray-Gun Cleaning Machine: An automatic spray-gun cleaning machine shall have a self-covering or enclosing cover feature when not loading or unloading that in the cover's closed position allows no gaps exceeding 1/8 inch (3 mm) between the cover and the cabinet. This self-enclosing feature shall be maintained and consistently cover or enclose to these gap limits.
 - (3) Non-Automatic Remote Reservoir Spray-Gun Cleaning Machine: Non-automatic Remote Reservoir Spray-Gun Cleaning Machine shall meet all of the following requirements:
 - (a) Drain solvent cleaner from the sink/work-space quickly into a remote reservoir when work-space is not in use; and
 - (b) Machine reservoir shall not have cumulative total openings, including the drain opening(s) exceeding two square inches in area so that the reservoir will not allow VOC vapors to escape to the atmosphere; and
 - (c) Allow a machine design in which the base of the sink/work-space functions as the reservoir's top surface, as long as the fit/seal between sink base and reservoir container allows the reservoir to meet the opening limits specified in §5-13-300(3)(i)(b)(3)(b) of this rule.
- ii. Manual Spray-Gun Cleaning Requirements: An owner or operator manually cleaning spray-guns shall comply with the following requirements:
 - a. Disassembled spray-guns must be cleaned by non-mechanical, hand-held method of application of cleaners including but not limited to paint brushes, hand rollers, caulking guns, trowels, spatulas, syringe daubers, rags, and sponges;
 - b. Disassembled spray-guns must be soaked in a vat which remains covered at all times, except when the application equipment is being handled in the container, or transferred into or out of the container;
 - c. Solvent cleaners used to clean spray-guns shall be less than 10 percent VOC (excluding water and non-precursor organic compounds) and shall contain less than

8.0 percent VOC by weight (including water and non-precursor organic compounds) and calculated pursuant to VOC Regulatory as defined in this rule.

4. WORK PRACTICES-HANDLING, DISPOSAL AND STORAGE OF VOC-CONTAINING MATERIAL: An owner or operator of any surface coating facility shall store, handle, and dispose of VOC-containing material in a way to prevent the evaporation of VOC to the atmosphere. Work practices limiting VOC emissions include but are not limited to the following:
- i. Use and Storage: An owner or operator shall cover and keep covered each VOC-containing material which is not currently in use. A person shall store finishing and cleaning materials in closed or covered leak-free containers.
 - ii. Disposal of VOC-Containing Material: An owner or operator shall store all VOC-containing materials intended for disposal including, but not limited to, rags, waste coatings, waste brushes, waste rollers, waste applicators, waste solvents, and their residues, in closed, leak free containers. The containers shall be clearly marked "Disposal of VOC Material" and remain covered with a leak tight cover, when not in use.
 - iii. Minimize spills of VOC-containing coatings, thinners, and coating-related waste materials; ~~and~~
 - iv. Convey VOC-containing coatings, thinners, and coating-related waste materials from one location to another in closed containers or pipes.
 - v. Use of VOC Solvent for Surface Coating Cleanup: ~~An owner or operator may choose to use a VOC cleaning solvent for the cleaning of coating application equipment, if such application equipment does not use spray devices and the same principal solvent is used for cleaning as is used in the coating. An owner or operator shall minimize VOC emissions from cleaning of application, storage, mixing, and conveying equipment by ensuring that equipment cleaning is performed without atomizing the cleaning solvent and all spent solvent is captured in closed containers.~~

5. EMISSION CONTROL SYSTEM (ECS) REQUIREMENTS:

- i. ECS Control Efficiencies: To meet the requirements pursuant to §5-13-300(1)(ii) of this rule, an ECS shall be operated as follows:
 - a. Overall ECS Efficiency: ~~The overall capture and control efficiency (CE) of an ECS shall be determined by the equation below. An owner or operator, who chooses to use an ECS instead of meeting the limits in Table 1 of this rule and specified application methods, shall operate an ECS at an overall CE efficiency of at least 90%. Prevent at least 90% of the mass of the VOC emitted by each coating or process from entering the atmosphere except those controlled pursuant to the alternative in §5-13-300(5)(i)@2) of this rule.~~

$$i. \quad CE_{\text{Capture and Control}} = [CE_{\text{Capture}} \times CE_{\text{Control}}]/100$$

Where:

CE_{Capture and Control} = Overall Capture and Control Efficiency, in percent

CE_{Capture} = Capture Efficiency of the collection device, in percent,

As determined in Section 5-13-300.5.i.b

CE_{Control} = Control Efficiency of the control device, in percent,

As determined in Section 5-13-300.5.i.c.

- b. The capture efficiency of a VOC emission control system's collection device(s) shall be determined according to EPA's "Guidelines for Determining Capture Efficiency", January 9, 1995 and 40 CFR 51, Appendix M, Methods 204-204F, as applicable, or any other method approved by EPA and the Control Officer.
- c. The control efficiency of a VOC emission control system's control device(s) shall be determined using EPA Methods 2, 2A, 2C or 2D for measuring flow rates and EPA Methods 25, 25A, or 25B for measuring total gaseous organic concentrations at the inlet and outlet of the control device. EPA Method 18 shall be used to determine the emissions of exempt compounds.

~~b. Capture Efficiency:~~

~~For an ECS used pursuant to §5-13-300(1)(ii) of this rule, capture shall be at least 90%.~~

~~c. Control Efficiency of The Emissions Processing Subsystem:~~

~~(1) The ECS shall reduce the mass of VOC entering it by at least 90 percent.~~

~~d.(2) Alternative for Very Dilute Input: For VOC input-concentrations of less than 100 ppm (as carbon/methane) at the inlet of the ECS, the control efficiency is satisfied if the VOC output is less than 20 mg VOC/m³ (as methane) adjusted to standard conditions. emissions processing subsystem, an ECS' VOC processing subsystem also satisfies the processor efficiency requirements of this rule if:~~

~~(a) The VOC output is consistently less than 20 mg VOC/m³ (as carbon) adjusted to standard conditions; and~~

~~(b) The ECS consistently shows an overall control efficiency of at least 90% when tested pursuant to §5-13-500(4)(i)(b) of this rule, at VOC input concentrations exceeding 100 ppm (as carbon).~~

~~d. All VOC coatings used that are in excess of the VOC limits in Table 1 of this rule shall be clearly identified such that coating operators are informed that an ECS must be used.~~

ii. Operation and Maintenance (O&M) Plan Required for ECS:

- a. An owner or operator shall provide and maintain (an) O&M Plan(s) for any ECS, any other emission processing equipment, and any ECS monitoring devices used pursuant to this rule or to an air pollution control permit.
- b. The owner or operator shall submit to the Control Officer for approval the O&M Plans of each ECS and each ECS monitoring device used pursuant to this rule.
- c. The owner or operator shall comply with all identified actions and schedules provided in each O&M Plan.

iii. Providing and Maintaining ECS Monitoring Devices: Any owner or operator incinerating, adsorbing, or otherwise processing VOC emissions pursuant to this rule shall provide, properly install and maintain in calibration, in good working order and in operation, devices described in the facility's O&M Plan that indicate temperatures, pressures, rates of flow, or other operating conditions necessary to determine if air pollution control equipment is functioning properly and is properly maintained. Records

shall be kept pursuant to §5-13-500.2 which demonstrate that the ECS meets the overall control standard required by §5-13-300(5)(i) of this rule.

- iv. O&M Plan Responsibility: An owner or operator of a facility that is required to have an O&M Plan pursuant to §5-13-300(5)(ii) must fully comply with all O&M Plans that the owner or operator has submitted for approval, but which have not yet been approved, unless notified otherwise by the Control Officer in writing. If revisions to the plan have been submitted and not yet been approved by the Control Officer, then an owner or operator shall comply with the most recent O&M plan on file at Pinal County Air Quality Control District.
- v. Operation and Maintenance (O&M) Plan Contents For an ECS:
 - a. An O&M Plan for any ECS including any ECS monitoring devices shall include all of the following information:
 - (1) ECS equipment manufacturer;
 - (2) ECS equipment model;
 - (3) ECS equipment identification number or identifier that owner or operator subject to this rule assigns to such ECS equipment when manufacturer's equipment identification number is unknown,; and
 - (4) Information required by §5-13-500.42 and §5-13-500.3 of this rule.
 - b. Control Officer Modifications to Plan: After discussion with the owner or operator, the Control Officer may modify the plan in writing prior to approval of the initial O&M Plan. An owner or operator shall then comply with the plan modified.
 - c. Deficient Plan: The owner or operator subject to this rule, who receives a written notice from the Control Officer that the O&M Plan is deficient or inadequate, must make written revisions to the O&M Plan for any ECS including any ECS monitoring devices, and must submit such revised O&M Plan to the Control Officer within five working days of receipt of the Control Officer's written notice, unless such time period is extended by the Control Officer, upon written request, for good cause. During the time such owner or operator is preparing revisions to the O&M Plan, such owner or operator shall still comply with all requirements of this rule.

5-13-400 – ADMINISTRATIVE REQUIREMENTS

1. COMPLIANCE SCHEDULE VOC LIMITS:

- i. Emission Control System (ECS): Any owner or operator installing an ECS shall:
 - a. Implement all recordkeeping provisions of this rule.
 - b. Announce the intention to use an ECS to the Control Officer in writing if:
 - (1) The ECS is used as an alternative to meeting the spray-gun provisions of §5-13-300.2 of this rule; or
 - (2) The ECS is used as an alternative to meeting the gun cleaning machine provisions of §5-13-300.3 of this rule.
 - c. One year after rule adoption of this rule, the ECS announced pursuant to §5-13-400(1)(i)(b) shall be in continuous use.
- ii. VOC limits and Rule Requirements: Upon adoption of this rule, the owner or operator shall discontinue shelf purchase of materials that are non-compliant with §5-13-300(1)(i). The owner or operator has up to 6 months after rule adoption to complete use of existing non-compliant materials already purchased. A schedule for achieving compliant use of

materials shall be prepared and made available to an inspector upon request. This schedule shall specify that 6 months after rule adoption complete material compliance shall be achieved.

2. COMPLIANCE SCHEDULE O&M PLAN:

- i. O&M Plans for ECS equipment subject to this rule shall be revised ~~updated~~ by [< insert date 3 months after rule adoption >].
- ii. The Control Officer shall take final action on an O&M Plan revision/update to address the newly amended provisions of this rule within thirty calendar days of the filing of the complete O&M Plan revision/update. The Control Officer shall notify the applicant in writing of approval or denial.

5-13-500 – MONITORING AND RECORDS

1. RECORDKEEPING AND REPORTING: The owner or operator shall comply with the following recordkeeping requirements,

- i. The type and amount used of each VOC-containing coating which is regulated by name or type in Table 1 of this rule, and update each VOC-containing material, related to surface coating, that is not addressed by this table. This includes, but is not limited to, thinners, surfacers, and diluents.
- ii. Records shall be retained for five years and shall be made available to the Control Officer upon request.
- iii. Current Lists:
 - a. Maintain a current list of coatings, or any other VOC-containing materials regulated by this rule. This list shall include:

VOC content for each as received (before thinning). Express VOC content in 1 of 3 forms:

 - (1) Pounds VOC per gallon;
 - (2) Grams VOC per liter; or
 - (3) The percent VOC by weight along with the specific gravity or density, (Two numbers are required).
 - b. An owner or operator using any VOC coating subject to §5-13-300.1 of this rule shall have on site the written value of the VOC content ~~coating~~ in one of the following forms:
 - (1) A manufacturer's technical data sheet;
 - (2) A manufacturer's safety data sheet (MSDS); or
 - (3) Actual test results.
 - c. Usage or Purchase Records:

- (1) Monthly: Records of the amount of VOC coatings used shall be updated by the end of month for the previous month. Show the type and amount of each make-up (as described in §5-13-500(1)(iii) of this rule) and all other VOC cleaners or solvents to which this rule is applicable.
 - (2) Annually:
 - (i) Low VOC Coatings: Use of low VOC coatings shall be updated at least annually.
 - (ii) Low-VOC Cleaner: An owner and/or operator need not keep a record of a cleaning substance that is made by diluting a concentrate with water or non-precursor compound(s) to a level that qualifies as a “Low VOC Cleaner” if records of the concentrate usage are kept in accordance with this rule.
 - (3) Grouping by VOC Content: For purposes of recording usage, an operator may give VOC coatings, cleaners, and solvents of similar VOC content a single group-name, distinct from any product names in the group. The total usage of all the products in that group is then recorded under just one name. (In such a case, the operator must also keep a separate list that identifies the product names of the particular solvents included under the group name). To the group name shall be assigned the highest VOC content among the members of that group, rounded to the nearest 10th of a pound of VOC per gallon of material, or to the nearest gram VOC per liter of material.
- d. Facilities That Are Not Small Surface-Coating Sources: Facilities that are not small surface-coating sources shall for all coatings (except those recorded under §5-13-100(3)(~~iv~~)(c) low usage allowance), make the following listings for coatings that have VOC limits listed in Table 1 of this rule:
- (1) VOC Before Reducing: The VOC content of each coating as received, minus exempt compounds. (This figure is sometimes called the “EPA Method 24” VOC content on manufacturer’s data sheets). If the coating is a multi-part coating, list the manufacturer’s final VOC content.
 - (2) List Maximum VOC Content of Coating As Applied: For each coating that you thin/reduce or add any additive to, record in a permanent log either of the following:
 - (a) The maximum number of fluid ounces thinner/reducer added to a gallon of unreduced coating (or maximum g/liter), and the maximum fluid ounces of every other additive mixed into a gallon of the coating; or
 - (b) The VOC content of the coating after adding the maximum amount of thinner/reducer and other additives added as determined by the formula in the definition of VOC Regulatory in this rule.
- e. Aerosol Spray Cans: Maintain purchase records for aerosol spray-cans, including VOC content.
- iv. Frequency of Updating Usage or Purchase Records: Maintain records according to the following schedule:
- a. Small Surface-Coating Sources: Small surface-coating sources shall update each month’s records of coating use by the end of the following month.

- b. All Other Sources: For a source that does not meet the definition of small surface-coating source, update records monthly for each coating used that complies with the VOC limits in Table 1 of this rule. Complete a month's update by the end of the following month.
 - v. Grouping By VOC Content: The highest VOC content among the members of that grouping shall be assigned to that grouping, rounded to the nearest 10th of a pound. To identify what products belong within each group, after each group name and the group's VOC content of material must appear the name of each product in the group and its VOC content of material. For example: For flexible plastic parts, you use 20 gallons of primer that has 3.04 lb VOC/gal., 30 gallons of primer having 3.14 lb VOC/gal., and 40 gallons of primer having 2.89 lb VOC/gal. You may record usage as 90 gallons of flexible plastic primer containing 3.1 lb VOC/gal. If grams VOC per liter is used to record VOC content, round off to the nearest whole number of grams.
2. ECS RECORDING REQUIREMENTS:
- i. On each day an ECS is used at a facility pursuant to this rule, the owner or operator shall:
 - a. Record the amount and VOC content of coating, the amount of catalyst/hardener, and the amounts of solvent, reducer, and diluent used that were subject to ECS control pursuant to this rule; and
 - b. Make a permanent record of the operating parameters of the key systems as required by the O&M Plan; and
 - c. Make a permanent record of the maintenance actions taken within 24 hours of the action's completion for each day or period the O&M Plan requires maintenance be done.
 - ii. An explanation shall be entered for scheduled maintenance that is not performed during the period designated for it in the O&M Plan.
3. O&M PLAN RECORDS: An owner or operator of a facility shall maintain all of the following records in accordance with an approved O&M Plan for any ECS,
- i. Periods of time an approved ECS is operating to comply with this rule;
 - ii. Periods of time an approved ECS is not operating;
 - iii. Flow rates;
 - iv. Pressure drops;
 - v. Other conditions necessary to determine if the approved ECS is functioning properly;
 - vi. Results of visual inspections; and
 - vii. Correction action taken, if any.
4. COMPLIANCE DETERMINATION AND TEST METHODS:
- i. Compliance Determination: The following means shall be used to determine compliance with this rule. When more than one test method is permitted for a determination, an exceedance of the limits established in the rule determined by any of the applicable test methods constitutes a violation of this rule.
 - a. Measurement of VOC content of materials subject to §§5-13-300.1 or 5-13-300.2 of this rule shall be conducted and reported using one of the following means:

- (1) VOC content of coatings, solvents, and other substances having less than 5% solids will be determined by the test method in §§5-13-500(4)(ii)(f) of this rule (BAAQMD Method 31 [~~April 15, 1992~~May 18, 2005]) or 5-13-500(4)(ii)(g) (SCAQMD Method 313-91 [April 1997]) of this rule.
 - (2) The VOC content of coatings or other materials having 5% or more solids will be determined by the test method in §5-13-500(4)(ii)(c) (EPA Method 24), §§5-13-500(4)(ii)(f) (BAAQMD Method 31 [May 18, 2005]) or 5-13-500(4)(ii)(g) (SCAQMD Method 313-91 [April 1997]) of this rule.
 - (a) Plastics, powder coatings, and radiation-cured coatings shall be cured according to the procedures actually used in the coating process being tested before final VOC-emission determinations are made.
 - ~~(b) In the case of multi-component, polymerizing coatings tested according to §5-13-500(4)(i)(a) of this rule, Method 24 shall be modified to eliminate the post-mixing dilution step (that employs toluene or other solvent). Instead, the mixture shall be spread by appropriate technique to form a thin layer, occupying the entire bottom of the foil pan. Techniques included in the method referenced in §5-13-500(4)(i)(b) of this rule, can be used as a guide for such spreading.~~
 - b. The VOC content of gaseous emissions entering and exiting an ECS shall be determined by either EPA Method 18 referred to in §5-13-500(4)(ii)(b) of this rule, or EPA Method 25 ~~and its submethod~~, referred to in ~~in~~ §5-13-500(4)(ii)(d), or EPA Method 25a, referred to in §5-13-500(4)(ii)(d) or Method 25b, referred to in §5-13-500(4)(ii)(d) of this rule.
 - c. Capture efficiency of an ECS shall be determined according to EPA's "Guidelines for Determining Capture Efficiency", January 9, 1995 and 40 CFR 51, Appendix M, Methods 204-204F, as applicable ~~either by the methods in §5-13-500(4)(ii)(c) of this rule (EPA Method 204 and its submethods), or by using mass balance calculation methods in concert with the methods in §5-13-500(4)(i)(a) of this rule (EPA Methods 2, 2a, 2c, and or 2d).~~
 - d. Measurement of air pressure at the center of the spray gun tip and air horns of an air-atomizing spray gun shall be performed using an attachable device in proper working order supplied by the gun's manufacturer for performing such a measurement.
 - e. Temperature measurements shall be done with an instrument with an accuracy and precision of less than one-half degree Fahrenheit (0.25°C) for temperatures up to 480°F (250°C).
 - f. The transfer efficiency of the alternative coating application method shall be determined in accordance with the South Coast Air Quality Management District (SCAQMD) method "Spray Equipment Transfer Efficiency Test Procedure for Equipment User, May 24, 1989" and SCAQMD "Guidelines for Demonstrating Equivalency with District Approved Transfer Efficiency Spray Gun, September 26, 2002."
- ii. Test Methods Adopted By Reference: The EPA test methods as they exist in the Code of Federal Regulations (CFR) (July 1, ~~2015~~), as listed below, are adopted by reference.

The other test methods listed here are also adopted by reference, each having paired with it a specific date that identifies the particular version/revision of the method that is adopted by reference. These adoptions by reference include no future editions or amendments.

- a. EPA Methods 2 (“Determination of Stack Gas Velocity and Volumetric Flow Rate”), 2a (“Direct Measurement of Gas Volume Through Pipes and Small Ducts”), 2c (“Determination of Stack Gas Velocity and Volumetric Flow rate in Small Stacks or Ducts”), and 2d (“Measurement of Gas volumetric Flow Rates in Small Pipes and Ducts”). All 4 of the foregoing methods are in 40 CFR 60, Appendix A.
 - b. EPA Method 18 (“Measurement of Gaseous Organic Compound Emissions by Gas Chromatography”) ~~and its submethods~~ (40 CFR 60, Appendix A).
 - c. EPA Test Method 24 (“Determination of Volatile Matter Content, Water Content, Density, Volume Solids, and Weight Solids of Surface Coatings”) (40 CFR 60, Appendix A).
 - d. EPA Method 25 (“Determination of Total Gaseous Non-methane Organic Emissions as Carbon”) ~~and its submethods~~, 25a (“Determination of Total Gaseous Organic Concentration Using a Flame Ionization Analyzer”), and 25b (“Determination of Total Gaseous Organic Concentration Using a Nondispersive Infrared Analyzer”) (40 CFR 60, Appendix A).
 - e. EPA Test Methods 204 (“Criteria for and Verification of a Permanent or Temporary Total Enclosure”), 204a, 204b, 204c, 204d, 204e, and 204f (Appendix M, 40 CFR 51).
 - f. California’s Bay Area Air Quality Management District (BAAQMD) Method 31 (May 18~~r~~, 2005), “Determination of Volatile Organic Compounds in Paint Strippers, Solvent Cleaners, and Low Solids Coatings.”
 - g. California’s South Coast Air Quality Management District (SCAQMD) Method 313-91 (April 1997).
- iii. Test Methods for ECS: For coatings/adhesives controlled pursuant to ~~§5-13-300(2)(i) or §5-13-300(5)(iii)~~ §5-13-300(5) of this rule:
- a. Measurements of VOC emissions from an ECS shall be conducted in accordance with EPA Methods 18 ~~or its submethods~~, or by Method 2 o5 ~~or its submethods~~ (40 CFR 60, Appendix A).
 - b. Capture efficiency of an ECS shall be determined by mass balance in combination with ventilation/draft rate determinations done in accordance with §5-13-500(4)(iii)(c) of this rule or with US EPA Test Methods 204, 204a, 204b, 204c, 204d, 204e, and 204f (Appendix M, 40 CFR 51).
 - c. Ventilation/draft rates shall be determined by EPA Methods 2, 2a, 2c, ~~and or~~ 2d (40 CFR 60, Appendix A).

