

NOTICE OF FINAL RULEMAKING
MARICOPA COUNTY AIR POLLUTION CONTROL REGULATIONS
REGULATION III – CONTROL OF AIR CONTAMINANTS
RULE 336: SURFACE COATING OPERATIONS

PREAMBLE

1. Rule affected

Rule 336: Surface Coating Operations

Rulemaking action

Amend

2. Statutory authority for the rulemaking:

Authorizing statutes: A.R.S. §§ 49-474, 49-479, and 49-480

Implementing statute: A.R.S. § 49-112

3. The effective date of the rule:

Date of adoption: November 2, 2016

4. List of public notices addressing this rulemaking:

Notice of Briefing to Maricopa County Manager: May 2015

Notice of Stakeholder Workshops: June 29, 2015, September 3, 2015, December 17, 2015, and February 18, 2016

Notice of Maricopa County Board of Health Meeting: April 25, 2016

Notice of Proposed Rulemaking: 22 A.A.R. 1159, May 13, 2016

5. The name and address of department personnel with whom persons may communicate regarding the rulemaking:

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6. An explanation of the rule, including the department's reasons for initiating the rulemaking:

Summary:

Maricopa County Air Quality Department (department) amended Rule 336 (Surface Coating Operations) that regulates volatile organic compound (VOC) emissions from surface coating facilities that are not regulated by another source-specific Maricopa County rule. The Clean Air Act (CAA) requires that the U.S. Environmental Protection Agency (EPA) and the states control VOC emissions because VOCs react in the presence of sunlight to form ground-level ozone, a major component of “smog” which is hazardous to human health and the environment. Ozone is largely created by a photochemical reaction between nitrogen oxides (NO_x) and VOCs in the presence of sunlight. NO_x and VOCs called ozone precursors create ground-level ozone in urban areas because ozone precursors are emitted from vehicle exhausts, fuel combustion, and VOC coatings used for various surface coating operations such as those regulated in Rule 336. This is the first revision of Rule 336 since April, 7 1999.

The Phoenix area, determined by violations of the National Ambient Air Quality Standards (NAAQS), has been reclassified from “marginal” to “moderate” nonattainment for the 2008 eight-hour ozone NAAQS. The department updated Rule 336 to address the CAA requirements of the State Implementation Plan (SIP) in response to this higher nonattainment classification. The CAA section 172(c)(1) requires nonattainment areas, such as Phoenix, to use “reasonably available control measures” (RACM) including “reasonably available control technology” (RACT) to control VOC emissions. Section 182(b)(2)(A) of the Act provides that the EPA define RACT for VOCs in EPA Control Technique Guidelines (CTGs). The CTGs provide State and local air pollution control authorities information that assists in determining VOC-RACT for air quality rules. Rule 336 has been updated to these CTG-RACT requirements.

The EPA defines RACT as “the lowest emission limitation that a particular source is capable of meeting by the application of control technology that is reasonably available considering technological and economic feasibility.” To attain the required RACT, Maricopa County revised Rule 336 to incorporate five (5) CTGs issued by the EPA in 2006 through 2008. The CTGs address the following topics:

- Metal Furniture Coatings
- Large Appliance Coatings
- Miscellaneous Metal and Plastic Parts
- Paper, Film, and Foil Coatings

- Industrial Cleaning Solvents

Rule 336 incorporated the RACT recommendations from these five CTGs. Rule 336 included CTG recommendations for additional types of VOC coating limits, transfer efficiency for spray equipment to be comparable to the transfer efficiency found in a High Pressure, Low-Volume (HVLV) spray guns, and additional work practices to reduce VOC emissions.

In addition, Rule 336 corrected typographical or other clerical errors; made minor grammatical changes to improve readability or clarity; modified the format, numbering, order, capitalization, punctuation, or syntax of certain text to increase standardization within and among rules; or made various other minor changes of a purely editorial nature. As these changes do not alter the sense, meaning, or effect of the rules, they are not described in detail here, but can be readily discerned in the “underline/ strikeout” version of the rules contained in Item 17 of this notice.

Background:

The department held four workshops for this rulemaking. Each of the four workshops contributed to this proposed draft Rule 336; the progression of which is described as follows:

Workshop#1: Monday June 29, 2015

This workshop introduced the proposal to revise Rule 336 and to include sections in the revised rule that address three additional VOC categories:

- Pleasure Craft Manufacturing and Repair
- Adhesives and Adhesive Primers
- Polyester Resin Operations

These VOC source categories have been controlled to date, with the general terms of Rule 330 (Volatile Organic Compounds) which has not been updated since 1996. Rule 330 (Volatile Organic compounds) is a generic VOC Rule which regulates a variety of source-specific facilities in addition to these source categories.

Workshop #2: Thursday September 3, 2015

Stakeholders (surface coating manufacturers and supplier representatives) expressed concern about combining the variety of VOC regulations into one rule. This workshop focused on whether it was feasible to put all four of the VOC source categories into one rule. Stakeholders unanimously recommended dividing the VOC regulated sources into separate rules.

Workshop #3: Thursday December 17, 2015

Three separate rules were proposed at this workshop in response to stakeholder requests:

- Rule 336: Miscellaneous Surface Coating Operations (included Pleasure Craft Surface Coating Operations)
- New Rule 357: Miscellaneous Industrial Adhesives
- New Rule 356: Polyester Resin Operations.

Pleasure Craft Surface Coating Operations were included in the revision of the existing Rule 336; this left the introduction of two new VOC source specific rules - Rule 356 and Rule 357.

Workshop #4: Thursday February 18, 2016

Revised Rule 336 was presented. Pleasure Craft Manufacturing and Repair coatings were added as a section in the proposed amended Rule 336 and the two remaining “new” VOC rules were put on-hold. The department determined that negative declarations will be submitted for the two CTG source categories, adhesives and adhesive primers and polyester resin operations.

Issues Raised and Discussed During this Rulemaking Process:

Label Containers that Contain VOC: Work Practices, Section 304 requires “Containers in which VOC-containing materials are stored must have a legible label identifying the container’s contents”. In a previous posted draft of Rule 336, specific text for labels was required to comply with this section. The Resource Conservation and Recovery Act (RCRA) requires specific text to comply with labeling for hazardous wastes. The goal of the Rule 336 labeling requirement is to identify containers that contain VOC. The specific RCRA labeling text will satisfy this goal, so owners or operators do not have to prepare two different labels for VOC containing containers.

Quality Class Q Protective Coating: A stakeholder commented that the Quality Class Q protective coating used on equipment or components within a containment facility of a nuclear power plant was not current. This requirement referenced in Sections 103.5(d) and defined in Section 200.74 only specifies that this category of coating is required for this purpose and does not require which method is most current for compliance.

Changes Proposed in the Surface Coating Limits for Rule 336: Rule 336 increased the variety of VOC coating categories listed in the rule as was recommended in the CTG for surface coating operations. Rule 336 also added the specific definitions for these new coating categories. Even with the addition of a greater variety of

coating categories, the VOC thresholds for the coatings found in Rule 336 remained the same and were not lowered.

Limit Usage of Noncompliant VOC Surface Coatings: Several Stakeholders asked to clarify Exemption Section 103.5(b) which addresses use of VOC coatings that exceed the VOC coating thresholds required in the Rule 336 Tables. Clarifying text was added to this exemption that states: “Low usage of VOC coatings which exceed VOC thresholds for coating categories listed in Tables 336-1 through 336-7 of this rule”. The noncompliant coatings are permitted for use if the annual aggregate usage does not exceed 55 gallons per year (208 liters/yr.) at a facility. The operator shall update usage records of these coatings at the end of each month, pursuant to Section 501.2 of this rule.

Small Surface Coating Source (SSCS) Exemption: Stakeholders requested that the SSCS exemption be retained. The SSCS exemption has been retained in Section 103.5(c) and is defined in Section 200.77. SSCS was modified to exclude the daily limit requirement and retained the option that a facility that exceeds a 2 ton VOC/year emission limit for processes regulated by this rule may retain the exemption, if the owner or operator agrees in writing to enforceable permit conditions that establishes these or stricter limits.

Clarification of Limits for Touch-Up and Repair Operations: Stakeholders asked for clarification: Touch-up and Repair coatings are exempt (Section 103.3) and Touch-up and Repair coating VOC thresholds are found in Rule 336: Table-1 and Table -4. These are not conflicting requirements because it depends on the substrate if touch up or repair coatings are exempt or have VOC threshold limits. “Touch-up and repair coatings” for Plastic Parts Coatings are exempt from the VOC limits. This exemption is described on page 31 of the CTG (Miscellaneous Metal and Plastic Parts Coatings: September 2008). The “Touch-up and Repair” coating thresholds listed in Table 336-1 are coating limits for Metal Parts and Product Coatings and are partially exempt. “Metal part touch-up and repair coatings” are only exempt from the application methods (Rule 336: Section 302) but are subject to the remaining provisions of this rule. The “Touch-up and Repair” coating thresholds listed in Table 336-4 are coating limits for Business Machine Coatings and are not exempt.

Demonstration of an HVLP Spray Gun Equivalent or Alternative Application Methods: In workshop discussions Stakeholders asked to clarify compliance determination for the “alternative application method” spray guns. This provision saves Stakeholders time, because it eliminates the requirements of getting approvals

from the Control Officer for use of new spray-gun technologies. Section 302.1(e) states that an EPA recommendation is sufficient for the approval process of the proposed application method:

Section 302.1(e): An Alternative Application Method: Any method approved by the Administrator of the EPA as HVLP-equivalent.

This requirement was changed since the last posting of the Notice of Proposed Rulemaking for Rule 336 on May 13, 2016.

Three Pleasure Craft Surface Coating Limits: Stakeholders commented that three pleasure craft VOC surface coating limits: Extreme High Gloss Coatings; Finish Primer/Surfacer; and Other Substrate Anti-foulant Coating should be higher than the limits proposed in the CTG (Miscellaneous Metal and Plastic Parts Coatings, September, 2008). Stakeholders have challenged these CTG recommended limits to EPA in 2010. The EPA responded in a June 1, 2010 decision that clarified these suggested pleasure craft VOC surface coating thresholds were RACT recommendations provided in the CTG and should be “used by the states to determine what constitutes RACT for VOC operations in their particular ozone nonattainment areas.” The department reviewed both the Stakeholder recommendation and the EPA’s decision and included in Rule 336, Table 336-7 the following VOC limits:

Extreme High Gloss Topcoat	600 g VOC/l;
Finish Primer Surfacer;	600 g VOC/l;
Other Substrate Anti-Foulant Coating	400 g VOC/l.

The department reviewed Stakeholder recommendations and determined these limits constitute RACT for VOC operations in the Phoenix ozone nonattainment area.

Industrial Cleaning Solvent CTG –VOC Limit for Solvent Cleaners is 0.21 lbs. per gallon: Stakeholders requested clarification of why solvent cleaner VOC limits are not listed in Section 303.2 (c) where VOC solvent cleaners are referenced. The VOC threshold limit for solvent cleaners was deleted and replaced with the requirement in Section 305.6: “VOC solvents can be used for cleaning coating application equipment only if spray devices are not used and the same principal solvent is used for cleaning as is used in the coating”.

Rule 336 does not provide a VOC solvent cleaning limit because surface coating cleaners have their own properties with traditionally low VOCs. The cleaning chemicals used in surface coating cleaning operations

contain little VOC and therefore generate negligible emissions, as described on page 8 of the CTG for Miscellaneous Metal and Plastic Parts Coatings (September 2008).

Recordkeeping Requirements for an Aerosol Spray Can Exemption: Stakeholder requested adding Section 501.2(e) to clarify recordkeeping requirements for aerosol spray cans coatings. These requirements include maintaining purchase records for aerosol spray-cans, including VOC content of can contents.

Exemption of Aerosol Spray Can Coating Application and Total Facility VOC Threshold Limits: Stakeholders asked for clarification of how the exemption of the aerosol spray can applications of VOC materials contribute to the overall facility VOC usage. Section 103.5(a) (Aerosol Spray Can Coating Exemption) applies to any use of non-refillable containers that are less than 22 fluid ounces (0.66 liter) capacity and the VOC usage of this exemption contributes to the 2 tons/yr facility threshold of this rule as these aerosol spray can applications are insignificant activities. Rule 200 (of these rules) states: Emissions at or below 2 tons/yr qualifies as an insignificant activity (Rule 200, Section 200.63). Aerosol spray cans do not qualify as a “trivial activity” as aerosol spray can coating is “conducted as part of a source’s primary business activity” qualifying it as an insignificant activity (Rule 200, Section 200.127). Permits address multiple insignificant activities and their cumulated contribution to a facility’s overall coating limits.

VOC Coating Category - “Other Metal Parts and Products”: Stakeholders expressed concern about two VOC coating thresholds recommended in the CTG for Miscellaneous Metal and Plastic Parts Coatings; “One-Component” and “Multi-component” coatings. These two VOC coatings were listed in three of the Tables in Rule 336: Table 336-1(Metal Part and Products), Table 336-3 (Plastic Parts and Products), and Table 336-4 (Metal Furniture and Large Appliance Coatings). Stakeholders stated that the “One-Component” and “Multi-component” coatings are general use coatings that are currently regulated in the “Other Metal Parts and Products Coating” category. During workshop discussions, Stakeholders recommended retaining this general coating category rather than replacing it with two new coating categories. Stakeholders recommended keeping the current general coating - “Other Metal Parts and Products Coating”; this coating category is a VOC coating category for miscellaneous non-source specific surface coatings that is used in as much as 40% of the coatings at Stakeholder operations and includes these two “new” recommended coatings.

Based on this information the department has omitted the “One-Component” and “Multi-component” coating” category in two of the three Rule 336 tables. The two CTG proposed coatings are redundant with “Other Metal

Parts and Products Coating” and will be regulated within this existing coating category. “Other Metal Parts and Products Coatings” represent miscellaneous coatings that do not belong to a source specific coating category. The “Other Metal Parts and Products Coating” category has been retained in Tables 336 -1 and 336-3 and the CTG suggested coating categories removed. These two CTG suggested coating categories were retained and still apply in Rule 336, Table 336-4 (Metal Furniture and Large appliance Coatings). The definitions of the two CTG suggested coating categories are: “One-Component” is ready to apply straight from the container and “Multi-component” is a coating that needs a catalyst or hardener.

O & M Plan and the Spray Gun Cleaning Machine: Stakeholders asked if an O&M plan is required for a spray gun cleaning machine; it is not required and this requirement has been deleted from an earlier version of the proposed rule (previously Section 303.1(g)).

Allow Use of Usage Records for Compliant Recordkeeping: Stakeholders requested that usage records of VOC materials be a compliant source for recordkeeping requirements. Rule 336, Section 501.1(b) was changed to Section 501.1(c) and allows either usage records or the traditional purchase records. This change in recordkeeping requirements provides less stringent recordkeeping by omitting the requirement for daily recordkeeping for all owners or operators, who use VOC coatings and VOC solvent cleaners, not just for “consistently low users” and allows for usage records to comprise compliant recordkeeping in addition to purchase records.

Increase Overall Emission Control System (ECS) Efficiency from 85% to 90%: The CTG Miscellaneous Metal and Plastic Parts Coatings (September 2008) recommends the increase the overall ECS control efficiency to capture at least 90% from the current 85% (Rule 336 Section 305.1(a)).

Deletion of the Military Exemption: Rule 336 contained a military exemption in Section 305.4(f); this exemption was placed in the rule for one particular source when the rule was drafted in 1999. The CTGs do not recommend a military exemption. The department researched these types of coatings and found that since 1999 there are new, compliant, low VOC coatings that may function well as a substitute coating. If a source uses a non-compliant coating, the burden of proof is on the source to demonstrate that there are no other compliant coatings that can be used to achieve the desirable effect of the non-compliant coating.

Description of Amendments: Amendments in Rule 336 are as follows:

- Deleted definitions that are already defined in Rule 100

- Deleted definitions that are not found in the text of the rule
- Added definitions of different types of coatings listed in the CTGs and terms listed in the rule
- Moved the exemptions from Section 300 to Section 100
- Incorporated the overall ECS control efficiency recommended in the CTG of 90%
- Defined compliance for alternative application methods
- Deleted the vapor pressure requirement for VOC-containing cleaning materials
- Added new work practices that are listed in the CTG
- Clarified existing work practices in Section 300, such as labeling and transferring in and out of containers
- Updated the Operations & Maintenance (O and M) language in Section 305
- Updated the compliance schedule in Section 400
- Streamlined the recordkeeping provisions in Section 500
- Updated the test methods listed in Section 500
- Corrected typographical or other clerical errors.

Deleted definitions that are already defined in Rule 100: Several definitions were deleted in Rule 336, because they are contained in Rule 100; these include definitions for organic compounds (Section 229), VOC- borne coatings (Section 252), and VOC borne diluents.

Deleted definitions that are not found in the text of the rule: Definition for Heat Sensitive Material (Section 220); Polyester and Polyester Resin (Section 234) and Polyester Composite (Section 235) are also deleted, because they no longer appear in proposed Rule 336.

Added definitions of different types of coatings listed in the CTGs and terms used in the rule: There are a total of 54 new definitions in Rule 336, Section 200. Most of these definitions reflect the addition of new specialty coating limits in the four CTGs such as: Adhesion Primer (Section 200.2); Antifoulant Coating (Section 200.6); Business Machine (Section 200.8) Camouflage Coating (Section 200.9); Can Coating (Section 200.10) Etching filler (Section 200.24); Extreme High-Gloss Coating (Section 200.27); Finish Primer/Surfacer (Section 200.33); Heat Resistant Coating (Section 200.39); High Performance Architectural Coating (Section 200.40); High Build Primer/Surfacer (Section 200.41); High gloss Coating (Section 200.42); High Temperature Coating (Section 200.43); Mold -Seal Coating (Section 200.56); Multi-colored Coating (Section 200.57); Multi-component Coating (Section 200.58); Non-Precursor Organic Compounds (Section 200.59); One-component Coating

(Section 200.60); Optical Coating (Section 200.61); Pan Backing Coating (Section 200.64); Pleasure Craft Coating (Section 200.68); Prefabricated Architectural Component Coating (Section 200.69); Pretreatment Coating (Section 200.71); Pretreatment Wash Primer (Section 200.72); Shock-Free Coating (Section 200.77); Solar-Absorbent Coating (Section 200.80); Stencil Coating (Section 200.81); Texture Coating (Section 200.82); Vacuum Metalizing Coating (Section 200.90).

Other new definitions found in the rule include: Aerosol Can Spray Coating (Section 200.3); Alternative Application Methods (Section 200.5); Coating Application Equipment (Section 200.13); Dip Coating (Section 200.16); Drum coating (Section 200.17); Electric Dissipating coating (Section 200.18); Electric Insulating Varnish (Section 200.19) Electromagnetic Interference (EMI)/Radio Frequency Interference (RFI) Shielding (Section 200.20); Exempt Organic compounds (Section 200.25); Filler (Section 200.31); Flow Coat (Section 200.35); Fog Coat (Section 200.36); Gloss Reducer Section 200.37); Hand application Methods (Section 200.38); High-Volume, Low Pressure (HVLP) Spray-Gun (Section 200.44); In-Use or Handled (Section 200.48); Large Appliance (Section 200.49); Marine Vessel (Section 200.51); Military Specification Coating (Section 200.54); Non-Precursor Organic Compounds(Section 200.58); Pleasure Craft (Section 200.65); Pressure Sensitive Tape or Label(Section 200.68); Transfer Efficiency (section 200.86); VOC Regulatory (Section 200.91)

Moved the exemptions from Section 300 to Section 100: The exemptions in Rule 336, Section 300 were moved to Section 100. Other amendments moved to Section 100 (Section 103.3(b)(j) and 103.5) are the inclusion of a partial exemptions for stencil coatings. The stencil coating operations meet the definition of a surface coating operation and are not considered a graphic arts operation. North American Industry Classification System (NAICS) instead of Standard Industrial Classification (SIC) are in Section 103.2(b).

Amended the VOC emission limitations to be consistent with the CTGs: Deleted Table 1 and replaced it with Tables 336-1 through 336-7.

Incorporated the overall ECS control efficiency recommended in the CTG of 90%: New text was added in Section 302.5 requiring an ECS, if an owner or operator is using non-compliant coatings. Changed the control efficiency from 85% to 90% in Sectin 305.1(b).

Clarified Alternative Application Method Compliance: Any method approved by the Administrator as HVLP-equivalent is compliant as an application method.

Deleted the VOC Vapor pressure requirement for VOC-solvent cleaners: Rule 336 permitted the use of VOC-solvent cleaners with less than 35 mm Hg vapor pressure. A South Coast Air Quality Management District Study (April 10, 2002) confirms that vapor pressure does not influence VOC mass emissions and does not result in further reduction of VOC emissions. This is an obsolete requirement and was deleted as it falsely misleads that low vapor pressure solvents are a form of emissions control.

Added new work practices that are listed in the CTGs: Section 304 added new text on cleaning up spills, added new text on conveyance of VOC-containing material, and added new text requiring labeling VOC-containing containers. Sections 304.2 and Section 304.3 were clarified. Section 304.5 clarified the labeling of containers.

Updated the O & M Plan language in Section 305: Section 305.2 added new text regarding O & M Plans.

Updated the compliance schedule in Section 400:

- Sections 401 and 401.2 deleted outdated compliance dates.
- Sections 401.1 and 401.2 added text that requires the use of the new VOC emission limits for coatings six months after the date of adoption of the rule and added text that requires the use of the new type of spray gun for coating no later than six months after the date of adoption of the rule.
- Section 402.1 added text that requires dates for compliance with the installation of the ECS and with the O&M Plan requirements no later than 3 months after the rule is adopted.

Streamlined the recordkeeping provisions in Section 500:

- Section 501 added text to expand the type of documents that will comply with recordkeeping requirements and allow submittal of records in electronic or paper format.
- Sections 501 required less stringent recordingkeeping for all users, not just low VOC coatings users. The requirement for daily records was eliminated for all users.

Updated the test methods listed in Section 500: Sections 503 updated the dates and sections of the California rules herein listed.

7. Demonstration of compliance with A.R.S. § 49-112:

Under A.R.S. § 49-479(C), a county may not adopt a rule or ordinance that is more stringent than the rules adopted by the Director of the Arizona Department of Environmental Quality (ADEQ) for similar sources unless it demonstrates compliance with the applicable requirements of A.R.S. §49-112.

§ 49-112 County regulation; standards

§ 49-112(A)

When authorized by law, a county may adopt a rule, ordinance or other regulation that is more stringent than or in addition to a provision of this title or rule adopted by the director or any board or commission authorized to adopt rules pursuant to this title if all of the following conditions are met:

1. The rule, ordinance or other regulation is necessary to address a peculiar local condition.
2. There is credible evidence that the rule, ordinance or other regulation is either;
 - (a) Necessary to prevent a significant threat to public health or the environment that results from a peculiar local condition and is technically and economically feasible.
 - (b) Required under a federal statute or regulation, or authorized pursuant to an intergovernmental agreement with the federal government to enforce federal statutes or regulations if the county rule, ordinance or other regulation is equivalent to federal statutes or regulation.
3. Any fee or tax adopted under the rule, ordinance or other regulation will not exceed the reasonable costs of the county to issue and administer that permit or plan approval program.

§ 49-112(B)

When authorized by law, a county may adopt rules, ordinances or other regulations in lieu of a state program that are as stringent as a provision of this title or rule adopted by the director or any board or commission authorized to adopt rules pursuant to this title if the county demonstrates that the cost of obtaining permits or other approvals from the county will approximately equal or be less than the fee or cost of obtaining similar permits or approvals under this title or any rule adopted pursuant to this title. If the state has not adopted a fee or tax for similar permits or approvals, the county may adopt a fee when authorized by law in the rule, ordinance or other regulation that does not exceed the reasonable costs of the county to issue and administer that permit or plan approval program. The department complies with A.R.S. § 49-112(A) in that Maricopa County fails to meet the National Ambient Air Quality Standards for both ozone and particulates. The County failed to meet 2008 8-hour ozone standard by the marginal area attainment date of July 20, 2015. The EPA issued a final rule, effective June 3, 2016, reclassifying the Maricopa County area to “moderate” (published at 86 FR 26697, May 4, 2016). Further, a portion of the County was classified as a serious ozone nonattainment area under the previous 1-hour ozone standard requiring the county to continue to maintain the measures and requirements that allowed the county to attain that standard. Revisions to Rule 336 addressed the requirements of the State Implementation Plan (SIP) for “moderate”

nonattainment for the 2008 eight-hour ozone national ambient air quality standard (NAAQS). The amendments in Rule 3336 included Reasonably Available Control Technology (RACT).

The department complies with A.R.S. § 49-112(B) in that the amendments to Rule 336 are not more stringent than or in addition to a provision of Title 49 or rule adopted by the director or any Board or commission authorized to adopt rules pursuant to Title 49, address the peculiar local conditions in Maricopa County, are authorized under A.R.S. Title 49, Chapter 3, Article 3, and are not in lieu of a state program.

8. Documents or studies referenced and/or reviewed for this rulemaking:

South Coast Air Quality Management District (SCAQMD) -Technology Assessment to Determine the Relationship of Solvent Vapor Pressure and VOC Mass Emissions: Philip O’Bell, Chung Liu, Henry Hogo; April 10, 2002

U. S. Environmental Protection Agency, “Control Techniques Guidelines for Large Appliance Coatings,” September, 2007, www.epa.gov/ttn/oarpg/t1/ctg/20070928_large_app_ctg.pdf.

U. S. Environmental Protection Agency, “Control Techniques Guidelines for Metal Furniture Coating,” July, 2007, www.epa.gov/ttn/oarpg/t1/ctg/ctg_furniture_ctg062807.pdf.

U. S. Environmental Protection Agency, “Control Techniques Guidelines for Miscellaneous Metal and Plastic Parts Coatings,” September,2008, www.epa.gov/ttn/oarpg/t1/ctg/miscmetal_ctg093008.pdf.

U. S. Environmental Protection Agency, “Control Techniques Guidelines for Industrial Cleaning Solvents,” September, 2006, www.epa.gov/ttn/oarpg/t1/ctg/indus_clean_solv_09_29_06.pdf.

U. S. Environmental Protection Agency, “Control Techniques Guidelines for Paper, Film and Foil Coatings,” September ,2006, www.epa.gov/ttn/oarpg/t1/ctg/20070928_paper_film_ctg.pdf.

Notice of Final Rulemaking, Title 18, Chapter 2. Arizona Administrative Register, Volume 14, Issue 9, July 18, 2008 PP. 2834-2842.

US EPA Internal letter, June 1, 2010: To: Chief, Air Branch Regions I- X: From: Stephen D. Page, Director Office of Air Quality Planning and Standards: Control Technique Guidelines for Miscellaneous Metal and Plastic Part Coatings – Industry Request for Reconsideration

9. A showing of good cause why the rule is necessary to promote a statewide interest if the rule will diminish a previous grant of authority of a political subdivision:

Not applicable.

10. Summary of the economic, small business, and consumer impact:

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

A. An identification of the rulemaking.

This rulemaking revised Rule 336 (Surface Coating Operations).

B. An identification of the persons who will be directly affected by, bear the costs of or directly benefit from the rulemaking.

The persons who will be directly affected by and bear the costs of this rulemaking will be facilities in Maricopa County that use VOC coatings listed in Tables 336-1 through 336-7 of the rule that are not more specifically regulated by another source-specific rule within Maricopa County Rules 300 to 359 of Regulation III. Partial exemptions apply to certain coatings, application methods, and for low usage conditions. The department has issued permits to more than 160 facilities that are subject to Rule 336.

C. Cost benefit analysis:

(i) Costs and benefits to the implementing agency and other agencies directly affected by the implementation and enforcement of the rulemaking.

Because this rulemaking does not impose any new compliance burdens on permitted regulated entities or introduce additional regulatory requirements, the department deemed that none of the revisions have potentially significant economic impacts on permitted sources. It is expected that the department will benefit from the increased clarity of the rule with decreased time to inspect a facility or prepare a permit. In addition, the rulemaking will not impose increased monetary or regulatory costs on other state agencies, political subdivisions of this state, persons, or individuals so regulated.

The benefits of the rule revision are anticipated to be a result of the following changes:

- Updated the definitions;
- Amended the VOC emission limits for surface coatings consistent with the CTGs;
- Extended Rule 336 to include the pleasure craft industry;
- Deleted an exemption for the military;
- Incorporated the overall Emission Control System (ECS) control efficiency listed in the CTGs of 90%;

- Incorporated the transfer efficiency listed in the CTGs, which is the same as the transfer efficiency of a HVLP spray gun;
- Deleted the sprayless equipment exemption for vapor pressure limits;
- Added new work practices that are listed in the CTG and clarified existing work practices;
- Updated the Operations & Maintenance (O and M) language;
- Updated the compliance schedule;
- Streamlined the recordkeeping provisions;
- Updated the test methods;
- Corrected typographical or other clerical errors.

The sources subject to revised Rule 336 already have permits in which these requirements are addressed. Therefore, this revised rule does not impose new requirements on the permitted facilities, and no costs would be incurred for compliance with the rule revisions.

(ii) Costs and benefits to a political subdivision of this state directly affected by the implementation and enforcement of the rulemaking

The rule revisions will not impose increased monetary or regulatory costs on other state agencies, political subdivisions of this state, persons, or individuals so regulated.

(iii) Costs and benefits to businesses directly affected by the rulemaking, including any anticipated effect on the revenues or payroll expenditures of employers who are subject to the rulemaking.

The department anticipates that increased clarity and compliance options provided by the Rule 336 revisions will provide a benefit to the regulated and permitted sources; it will take less time for sources subject to the rule to understand and comply with the rule, which leads to increased compliance, which leads to decreased costs of compliance to the regulated community. The department does not anticipate these rule revisions to have a significant impact on a person's income, revenue, or employment in this state related to this activity. The rule revision will not impose increased monetary or regulatory costs on individuals so regulated.

D. A general description of the probable impact on private and public employment in businesses, agencies and political subdivisions of this state directly affected by the rulemaking.

The rule revisions will not impose increased monetary or regulatory costs on other state agencies, political subdivisions of this state, persons, or individuals so regulated.

E. A statement of the probable impact of the rulemaking on small businesses.

This rulemaking does not impose any new compliance burdens on regulated entities that are permitted or introduce additional regulatory requirements and will not impose increased monetary or regulatory costs on any permitted business, persons, or individuals so regulated. As such, there are no costs to pass through to consumer, which means there are no impacts on consumers.

An identification of the small businesses subject to the rulemaking.

Small businesses subject to this rulemaking are those facilities in Maricopa County that use VOC coatings listed in Tables 336-1 through 336-7 of the rule that are not more specifically regulated by another source specific rule within Maricopa County Rules 300 to 359 of Regulation III. Of the approximately 150 commercial permitted sources covered by the rule, about 90 are small businesses.

The administrative and other costs required for compliance with the rulemaking.

This rulemaking updated and clarified existing rule provisions and definitions to be consistent with federal performance standards; and reduced confusion and improved understanding and readability. The department considered the implications of the amendments to the regulated entities and the implementing agency and deemed that none of the rule revisions have potentially significant economic impacts.

F. A statement of the probable effect on county revenues.

The rule revisions will not impose increased monetary or regulatory costs on other county revenues, political subdivisions of this state, persons, or individuals so regulated. Without costs to pass through to customers, there is no projected change in consumer purchase patterns and, thus, no impact on county revenues from sales taxes.

G. A description of the methods that the agency may use to reduce the impact on small businesses.

(i) Establishing less costly compliance requirements in the rulemaking for small businesses.

By correcting and clarifying rule provisions and definitions and streamlining recordkeeping provisions, this rulemaking lessens or eases the regulatory burden for small businesses.

(ii) Establishing less costly schedules or less stringent deadlines for compliance in the rulemaking.

This rulemaking corrected or clarified rule provisions and definitions to reduce confusion and improve understanding and readability.

(iii) Exempting small businesses from any or all requirements of the rulemaking.

This rulemaking corrects or clarifies existing rule provisions and definitions to reduce confusion and improve understanding and readability.

(iv) A description of any less intrusive or less costly alternative methods of achieving the purpose of the rulemaking.

This rulemaking corrected or clarified rule provisions and definitions to reduce confusion and improve understanding and readability.

H. A description of any data on which the rule is based:

Not-Applicable

I. If for any reason adequate data are not reasonably available, the agency shall explain the limitations of the data and the methods that were employed in the attempt to obtain the data and shall characterize the probable impacts in qualitative terms:

Not-applicable

11. Name and address of department personnel with whom persons may communicate regarding the accuracy of the economic, small business, and consumer impact statement:

Name: Kathleen Sommer or Hether Krause
Address: Planning and Analysis Division
Maricopa County Air Quality Department
1001 N. Central Ave., Suite 595
Phoenix, AZ 85004
Telephone: (602) 506-6010
Fax: (602) 506-6179
E-mail: aqplanning@mail.maricopa.gov

12. Description of the changes between the proposed rule, including supplemental notices and final rule:

Since the Notice of Proposed Rulemaking was published on May 13, 2016 (22 A.A.R 1159), the department made the following additional amendments:

- Section 103.6 (Partial Exemptions): Moved this section to new Section 302.2 (b) (Application Methods for Surface Coatings)
- Section 244 (Definition of “High-Volume, Low Pressure (HVLP) Spray Gun”): Deleted “and at the air horns” to accurately describe the pressure measurement. Additional options for compliance determination of an HVLP spray gun were added to the definition.
- Section 274 (Definition of “Refrigerated Glass Door Coating”): Added the definition of “Refrigerated Glass Door Coating”. The coating category is included in Table 336-5 (Coating Limits for Metal Furniture and Large Appliance). The definition and the coating limits in Table 336-5 are from South Coast Air Quality Management District Rule 1145 (Plastic, Rubber, Leather, and Glass Coatings) amended December 4, 2009.
- Section 275 (Definition of “Restricted Spray Gun”): Deleted the definition of “Restricted Spray Gun”
- Section 281 (Definition of “Strippable Booth Coating”): Retained the definition of “Strippable Booth Coating” and included the coating category in Tables 336-1 through 336-7; the VOC limit was not changed
- Table 336-1 (Coating Limits for Metal Parts and Products): Added multi-component and one-component VOC limits to match the CTG-Miscellaneous Metal and Plastic Parts Coatings
- Table 336-2 (Coating Limits for Can and Coil Coating): Moved fabric coating to Table 336-6 (Coating Limits for Paper, Film, and Foil Surface Coating) and deleted film coating because it was already in Table 336-6
- Table 336-3 (Coating Limits for Plastic Parts and Products): Added categories for flexible and non-flexible plastic parts and products
- Table 336-5 (Coating Limits for Metal Furniture and Large Appliances): Removed large appliances category because it is covered under multi-component and one-component categories
- Table 336-6 (Coating Limits for Paper, Fabric, Film, and Vinyl): Added vinyl
- Table 336-7 (Coating Limits for Pleasure Craft): Did not include the new coating category “antifouling sealer/tie coat”, as this relates to the CTG for Shipbuilding and Ship Repair Operations (Surface Coating). The department has determined that there are no emitting facilities in Maricopa County for this CTG source category.
- Table 336-7 (Coating Limits for Pleasure Craft): Removed the transition schedule for the coating limits

- Section 305.1 (Emission Control System (ECS) Requirements-ECS Control Efficiencies): Clarified the requirements for overall ECS efficiency, capture and control efficiency, and the alternative for very dilute input
- Section 501.2(b) (Recordkeeping and Reporting-Current Lists): Re-inserted SDS or MSDS and included in the introductory statement to Section 501.2(b) the sentence “The documentation must provide accurate VOC content values or be based on enforceable test methods as approved by the Administrator to determine the VOC content.”
- Section 501.2(c)(2) (Recordkeeping and Reporting-Current Lists): Deleted recordkeeping requirements for “low VOC coatings” and “low VOC cleaning solvents”
- Section 501.2(e) (Recordkeeping and Reporting-Current Lists): Added usage records as acceptable compliance documents for recordkeeping documentation for aerosol can spray coating
- Section 503 (Compliance Determination and Test Methods): Included text that allows for the use of alternative test methods to determine compliance with the rule and that allows test methods as approved by the Administrator to be used and clarified the provision regarding when more than one test method is permitted for a compliance determination

13. Summary of the comments made regarding the rule and the department response to them:

Since the Notice of Proposed Rulemaking was published on May 13, 2016 (22 A.A.R. 1159), the department received comments from the Salt River Project Agricultural Improvement and Power District (SRP) and PING, Inc. The comments and the department’s responses are provided below.

Comment #1: Section 304.5 (Work Practices-Handling, Disposal and Storage of VOC-Containing

Material) PING, Inc. commented that in the current draft of Rule 336, Section 304.2 states, in part, “The containers shall be clearly marked “Disposal of VOC Material” and remain covered with a leak tight cover, when not in use”. Marking of waste containers is both a best practice as well as a regulatory requirement. From a regulatory perspective, waste streams are typically regulated under the Resource Conservation and Recovery Act (RCRA). The workforce is trained to appropriately handle waste materials. Workers would look for the “Hazardous Waste” label to identify the appropriate container to place VOC-containing wastes. The current language in the draft rule requires the “containers shall be clearly marked “Disposal of VOC Material”. For those workplaces that are regulated by RCRA, the marking requirement noted in the rule adds complexity, as

now containers will need to be double-labeled. It would appear that the intent of the marking requirement is to make sure that the contents of the container are clearly identified. PING, Inc. proposes the language in the rule be modified to state “The containers shall be clearly marked “Disposal of VOC Material” or as required by other applicable law and remain covered with a leak tight cover, when not in use”.

Response #1: Section 304.5 (Work Practices-Handling, Disposal and Storage of VOC-Containing Material)

The language commented on by PING, Inc. was removed from Rule 336 prior to the publication of the Notice of Proposed Rulemaking. In the Notice of Proposed Rulemaking that was published on May 13, 2016 (22 A.A.R. 1159), the department proposed Section 304.5 to read “Containers in which VOC-containing materials are stored must have a legible label identifying the container’s contents”. The department retained this requirement. The specific RCRA labeling requirement complies with this requirement; double labeling will not be necessary.

Comment #2: Section 501.2(b) (Recordkeeping and Reporting-Current Lists)

SRP commented that: In the proposed revisions to Rule 336, MCAQD is proposing to remove the use of manufacturer’s safety data sheets (SDS or MSDS) as a coating’s written record of VOC content. The use of an SDS or MSDS is the most common source of VOC content information and removal of this source would cause an undue burden on a facility. SRP believes that MCAQD may have inadvertently partially deleted this section. SRP suggests that MCAQD retain the ability to use SDS or MSDS as an information source for the VOC content recordkeeping requirements.

Response #2: Section 501.2(b) (Recordkeeping and Reporting-Current Lists)

In response to SRP’s comment and the EPA’s comment, the department re-inserted Safety Data Sheets (SDS) or Material Safety Data Sheets (MSDS) and included in the introductory statement to Section 501.2(b) the sentence “The documentation must provide accurate VOC content values or be based on enforceable test methods as approved by the Administrator to determine the VOC content.” The EPA commented in June 2016 on all of the rules that the department is revising in regards to addressing the requirements of the State Implementation Plan (SIP) for “moderate” nonattainment for the 2008 eight-hour ozone national ambient air quality standard (NAAQS). In such comments, the EPA asked the department “to ensure the documents listed (to verify compliance) give accurate values and use enforceable test methods. For example, EPA generally has not approved the use of SDS/MSDS to determine compliance in SIP rules unless the SDS/MSDS specifies that the compound of interest was determined by an approved EPA method.”

Comment #3: Section 501.2(e) (Recordkeeping and Reporting-Current Lists)

SRP commented that: In the proposed revisions to Rule 336, Section 501.2(e), the recordkeeping requirements for aerosol spray cans are limited to purchase records. SRP suggests that MCAQD provide flexibility in the recordkeeping requirements and allow either purchase or usage records to be used. This would be consistent with other surface coating recordkeeping requirements contained in Section 501.2(c).

Response #3: Section 501.2(e) (Recordkeeping and Reporting-Current Lists)

The department added usage records as acceptable compliance documents for recordkeeping documentation for aerosol spray can coating.

14. Any other matters prescribed by the statute that are applicable to the specific department or to any specific rule or class of rules:

Not applicable.

15. Incorporations by reference and their location in the rules:

The department incorporated by reference sections of the Code of Federal Regulations in the following sections of the rule: Section 503.2 (Compliance Determination and Test Methods-Test Methods Incorporated By Reference)

16. Was this rule previously an emergency rule?

No

17. The full text of the rule follows:

MARICOPA COUNTY

AIR POLLUTION CONTROL REGULATIONS

REGULATION III – CONTROL OF AIR CONTAMINANTS

RULE 336

SURFACE COATING OPERATIONS

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Revised 07/13/88

Revised 09/21/92

Revised 06/19/96

Revised 04/07/99

Revised 09/25/13

Revised 07/13/1988; Revised 09/21/1992; Revised 06/19/1996; Revised 04/07/1999; Revised 09/25/2013; Revised

11/02/2016

MARICOPA COUNTY

AIR POLLUTION CONTROL REGULATIONS

REGULATION III – CONTROL OF AIR CONTAMINANTS

RULE 336

SURFACE COATING OPERATIONS

SECTION 100 – GENERAL

- 101 PURPOSE:** To limit the emission of volatile organic compounds (VOCs) from surface coating operations.

102 **APPLICABILITY:** This rule applies to VOC coating operations coatings listed in Tables 336-1 through 336-7 of this rule ~~Table 1 of this rule~~ that are not more specifically regulated by another source specific rule within Maricopa County Rules 300 to 359 of Regulation III. ~~Examples of coating operations not regulated by this rule appear subsection 305.4~~ as listed in Section 104 of this rule. Additionally:

102.1 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.

102.2 ~~Subsections 305.2 Section 103 through 305.7~~ sets forth partial ~~or conditional~~ exemptions for certain materials or uses employed by a surface coating operation subject to this rule.

102.3 This rule is not applicable to coatings having a VOC content, minus exempt compounds, of less than 0.15 lb VOC/gal (18g/L) nor to solvents having a VOC content of material less than 0.15 lb VOC/gal.

102.4 ~~NSPS & NESHAP:~~ In addition to this rule, facilities may be subject to New Source Performance Standards (NSPS) in Rule 360 and/or to National Emission Standards for Hazardous Air Pollutants (NESHAP) in Rule 370 of these ~~Rules and Regulations~~ rules.

103 **PARTIAL EXEMPTIONS:**

103.1 **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) Substrates made 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.

103.2 **Extreme Performance Coatings Exemption:** Extreme performance coatings are exempt from the VOC limits in Tables 336-1 through 336-7 of this rule but not from any other sections of this rule when used under the following conditions:

- a. On internal combustion engine components that are normally above 250°F (121°C) during use; or
- b. 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.

103.3 Plastic Parts Coating Exemption: The following types of plastic parts coatings are exempt from the VOC limits in Tables 336-1 through 336-7 of this rule but are subject to the remaining provisions of this rule.

- a. Touch-up and repair coatings.
- b. Stencil coatings applied on clear or transparent substrates.
- c. Clear or translucent coatings.
- d. Coatings applied at a paint manufacturing facility while conducting performance tests on the coatings.
- e. Non-compliant coatings: After a sufficient demonstration by the owner or operator that no compliant substitute coating exists, an owner or operator is permitted to use no more than 50 gal/yr. of an individual non-compliant coating, not exceeding 200 gal/yr total usage of all such coatings provided such coatings are approved for use in a Maricopa County Air Pollution Permit.
- f. Reflective coatings applied to highway cones.
- g. Mask coatings that are less than 0.5 millimeter thick (dried) and the area coated is less than 25 square inches.
- h. Electromagnetic Interference (EMI)/ Radio-Frequency Interference (RFI) shielding coatings.
- i. Heparin-benzalkonium chloride (HBAC)-containing coatings applied to medical devices, provided that the total usage of all such coatings does not exceed 100 gal/yr per facility.
- j. Business machine plastic part coatings:
 - (1) Texture coatings.
 - (2) Vacuum metalizing coatings.
 - (3) Gloss reducers.

- (4) Adhesion primers.
- (5) Electrostatic preparation coatings.
- (6) Resist coatings.
- (7) Stencil coatings.

103.4 Application Methods Exemption: The following coatings are exempt from application methods in Section 302 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.
- c. Plastic part coating for airbrush operations using less than 5 gal/yr of coating.
- d. Extreme high gloss coatings for pleasure craft surface coating operations.

103.5 Application Methods and VOC-Limit Exemption: The following surface coating operations are exempt from Sections 301, 302, and 305 of this rule but shall comply with Section 303, 304, and 500 of this rule.

- a. Aerosol can spray coating.
- b. Low Usage of VOC Coatings Which Exceed VOC Thresholds for Coating Categories Listed in Tables 336-1 Through 336-7 of this Rule: Non-compliant coatings are permitted for use if the annual aggregate usage does not exceed 55 gallons per year (208 liters/yr.) at a facility. The owner or operator shall update usage records of these coatings at the end of each month, pursuant to Section 501.2 of this rule.
- c. A Small Surface-Coating Source: A facility that has less than a 2 ton/year VOC emission limit in a Maricopa County Air Pollution Permit for surface coating operations regulated by this rule.
- d. A Quality Class Q protective coating that is used on equipment, structures, and/or components within a containment facility of a nuclear power plant.
- e. A tactical military-equipment coating that is approved in a Maricopa County Air Pollution Permit subsequent to a sufficient demonstration by the user that no compliant substitute exists.
- f. Large Appliance Coating:**

- (1) Stencil coatings.
- (2) Safety-indicating coatings.
- (3) Solid-film lubricants.
- (4) Electric-insulating and thermal-conducting coatings.
- (5) Coating application utilizing aerosol can spray coating.

g. 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.

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

- 104.1** Aerospace coating operations (Rule 348).
- 104.2** Architectural coatings including buildings and erected structures (Rule 335).
- 104.3** Solvent cleaning or stripping a surface for coating or other purpose (Rule 331).
- 104.4** Marine vessel exterior refinishing (EPA 453/B-97-001).
- 104.5** Printing and graphic arts coating (Rule 337).
- 104.6** Semiconductor manufacturing (Rule 338).
- 104.7** Coating or refinishing a highway vehicle or mobile equipment (Rule 345).
- 104.8** Coating wood furniture and fixtures (Rule 342).
- 104.9** Coating wood millwork (Rule 346).

SECTION 200 – DEFINITIONS: For the purpose of this rule, the following definitions shall apply, in addition to those definitions found in Rule 100 (General Provisions and Definitions) of these rules. In the event of any inconsistency between any of the Maricopa County air pollution control rules, the definitions in this rule take precedence.

~~201~~ **201** **ADHESIVE:** A material used for the primary purpose of bonding two or more surfaces together.

- 202** **ADHESION PRIMER:** A coating that is applied to a plastic polymer part to promote the adhesion of a subsequent coating.
- 202** **AEROSOL CAN:** A non-refillable hand-held container from which a product is dispensed by means of pressurized propellant packaged within the container.
- 203** **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.
- 203** **204** **AIR-DRIED COATING:** A coating which is dried by the use of air or forced warm air at temperatures up to and including 200°F (93.3°C).
- 205** **ALTERNATIVE APPLICATION METHODS:** Any method approved by the Administrator as HVLP-equivalent.
- 206** **ANTIFOULANT COATING:** A coating applied to the underwater portion of a pleasure craft to prevent or reduce the attachment of biological organisms, and registered with the United States Environmental Protection Agency (EPA) as a pesticide under the Federal Insecticide, Fungicide, and Rodenticide Act (7 United States Code Section 136).
- 204** **207** **BAKED COATING:** A coating that is dried or cured in an oven in which the oven temperature exceeds 200°F (93.3°C).
- 208** **BUSINESS MACHINE:** A device that uses electronic or mechanical methods to process information, perform calculations, print or copy information, or convert sound into electrical impulses for transmission, such as:
- 208.1** Products classified as typewriters under SIC Code 3572;
- 208.2** Products classified as electronic computing devices under SIC Code 3573;
- 208.3** Products classified as calculating and accounting machines under SIC Code 3574;
- 208.4** Products classified as telephone and telegraph equipment under SIC Code 3661;
- 208.5** Products classified as office machines, not elsewhere classified, under SIC Code 3579; and (6) photocopy machines, a subcategory of products classified as photographic equipment under SIC Code 3861.

- 209** **CAMOUFLAGE COATING:** A coating used, principally by the military, to conceal equipment from detection.
- 205 **210** **CAN COATING:** ~~Any~~ A coating either used in the production of metal cans applied to the surface(s) of formed cans or applied at a can making facility to the surface(s) of flat metal sheets or strips that are formed there into cans.
- 206 **211** **CAN PRINTING INK:** A fluid or viscous formulation used in can printing that imparts design, pattern, and/or alphanumeric symbols to a can.
- 207 **212** **CLEAR COAT:** ~~Any~~ A coating ~~which that~~ lacks color or opacity or is transparent.
- 213** **COATING APPLICATION EQUIPMENT:** Any equipment including, but not limited to, spray guns, wands, rollers, brushes ~~or any other means~~ used to apply or cover a surface with a coating for either aesthetic, protection or other purpose.
- 208 **214** **COIL COATING:** ~~Any~~ A coating applied to the surface(s) of flat metal sheets or strips that ~~are~~ is formed into rolls or coils not used to make cans.
- 209 **215** **DAY:** A period of 24 consecutive hours beginning at midnight.
- 216** **DIP COATING:** A method of applying a coating to a substrate by submersion into and removal from a coating bath.
- 217** **DRUM COATING:** Coating of a cylindrical metal shipping container larger than 12 gallons capacity but no larger than 110 gallons capacity.
- 218** **ELECTRIC DISSIPATING COATING:** A coating that rapidly dissipates a high-voltage electric charge.
- 219** **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.
- 220** **ELECTROMAGNETIC INTERFERENCE (EMI)/ RADIO-FREQUENCY INTERFERENCE (RFI) SHIELDING:** A coating used on electrical or electronic equipment to provide shielding against electromagnetic interference, radio frequency interference, or static discharge.
- 210 **221** **ELECTROSTATIC SPRAY/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.

- 241 **222** **EMISSION CONTROL SYSTEM (ECS):** A system, approved in writing by the Control Officer, to reduce emissions of volatile organic compounds. Such a system consists of an emissions collection system and an emissions processing subsystem, ~~designed and operated in accordance with good engineering practice to reduce emissions of volatile organic compounds.~~
- 242 **223** **END SEALING COMPOUND:** A compound which is coated onto can ends and functions as a gasket when the end is attached to the can.
- 224** **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.
- 243 **~~EXEMPT EVAPORATING COMPONENTS (EXEMPT COMPOUNDS):~~** ~~The non-VOC, evaporating portion of a coating formulation; this necessarily includes all non-precursor organic compounds, as well as water and other inorganic liquids and gases.~~
- 225** **EXEMPT COMPOUNDS:** The federally listed non-precursor organic compounds, which have been determined to have negligible photochemical reactivity as listed in 40 CFR 51.100(s)(1) and in Appendix G of these rules.
- 244 **226** **EXTERIOR CAN BASECOAT:** ~~Any~~ A coating applied to the exterior of a can to provide protection for the metal or to provide background for any lithographic or printing operation.
- 227** **EXTREME HIGH-GLOSS COATING:** A coating when tested by the ASTDM D-523 adopted in 1980 shows reflectance of 75 or more on a 60° meter.
- 245 **228** **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.~~
- 246 **229** **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.
- 247 **230** **FABRIC COATING:** ~~Any~~ A decorative or protective coating or reinforcing material applied either onto or impregnated into textile fabric.
- 231** **FILLER:** A relatively non-adhesive substance added to an adhesive to improve its working properties, permanence, strength, or other qualities.

- 218 **232** **FILM COATING:** ~~Any~~ A coating applied in a web coating process on film substrate other than paper or fabric, including, but not limited to, typewriter ribbons, photographic film, magnetic tape, and metal foil gift wrap.
- 233** **FINISH PRIMER/SURFACER:** ~~A coating applied with a wet film thickness of less than 10 mils prior to the application of a topcoat~~ for purposes of providing corrosion resistance, adhesion of subsequent coatings, a moisture barrier, or promotion of a uniform surface necessary for filling in surface imperfections. A finish primer/surfacer shall have a wet film thickness of less than 10 mils as determined by ASTM Method D 1212-85. A one-component finish primer is any finish primer where the coating resin cures without the need for an added catalyst or converter. A two-component finish primer is any finish primer where the coating resin cures only when a catalyst or converter is added.
- 219 **234** **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 .
- 235** **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.
- 236** **FOG COAT:** A coating that is applied to a plastic part for the purpose of color matching without masking a molded-in texture. A fog coat shall not be applied at a thickness of more than 0.5 mils of coating solids.
- 237** **GLOSS REDUCER:** A coating that is applied to a plastic part solely to reduce the shine of the part and is applied at a thickness of less than or equal to 0.5 mils of coating solids.
- 238** **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.
- 239** **HEAT-RESISTANT COATING:** A coating that must withstand a temperature of at least 400°F (204°C) during normal use.
- 240** **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).

241 **HIGH BUILD PRIMER/SURFACER:** A coating applied with a wet film thickness of 10 mils or more prior to the application of a topcoat for purposes of providing corrosion resistance, adhesion of subsequent coatings, or a moisture barrier, or promoting a uniform surface necessary for filling in surface imperfections. A high-build primer/surfacer shall have a wet-film thickness of 10 mils or more as determined by ASTM Method D1212-85.

242 **HIGH GLOSS COATING:** A coating that achieves at least 85 percent reflectance on a 60° meter when tested by ASTM D 523-89.

243 **HIGH TEMPERATURE COATING:** A coating that is certified to withstand a temperature of 1000°F (537°C) for 24 hours.

220 **HEAT SENSITIVE MATERIAL:** Materials which cannot consistently be exposed to temperatures greater than 203°F (95°C) without materially affecting desired function, performance, or other characteristics

244 **HIGH-VOLUME, LOW PRESSURE (HVLP) SPRAY GUN:** Spray equipment that is used to apply coating by means of a spray gun that operates at 10 psig of atomizing air pressure or less at the center of the air cap. A permanently affixed manufacturer's gun identification or manufacturer's gun literature shall identify and be proof of an HVLP gun.

221 245 **HIGHWAY VEHICLE:** Any 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.

222 246 **INTERIOR BASECOAT:** Any A coating applied to the interior of a can to provide a protective lining between the intended contents and the metal shell of the can.

223 247 **INTERIOR BODY SPRAY:** Any A coating sprayed onto the interior of a can to provide a protective film between the intended contents and the metal shell of the can.

248 **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.

- 224 **249** **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.
- 225 **250** **LOW PRESSURE SPRAY GUN:** An air-atomized spray gun, ~~that~~ which by design, functions best at ~~tip air cap pressures below 10 psig (516 mm Hg) (0.7 bar)~~, measured according to Section ~~503.14~~ 503.1(d) of this rule, and for which the manufacturer makes no public claims ~~to the public~~ that the gun can be used effectively above 12 psig ~~(619 mm Hg) (0.8 bar)~~.
- 251** **MARINE VESSEL:** A tugboat, tanker, freighter, passenger ship, barge, or other boat, ship or watercraft used for commercial purposes. This definition excludes those boats used primarily for recreational purposes.
- 226 **252** **METAL FURNITURE:** ~~Any 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.
- 253** **METALLIC COATING:** A coating that contains more than 5 grams of metal particles per liter of coating as applied.
- 254** **MILITARY SPECIFICATION COATING:** A coating that has a formulation that has been approved by a United States Military Agency for use on military equipment.
- 227 **MINUS EXEMPT COMPOUNDS or MINUS EXEMPT EVAPORATING COMPONENTS :** See VOC Content ~~Minus Exempt Compounds~~.
- 228 **255** **MOBILE EQUIPMENT:** ~~Any equipment~~ Equipment that is physically capable of being driven or drawn ~~upon~~ on a highway including, but not limited to, ~~the following types of equipment:~~ 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).
- 256** **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.
- 257** **MULTI-COLORED COATING:** A coating that is packaged in a single container, applied in a single coat and exhibits more than one color when applied.
- 258** **MULTI-COMPONENT COATING:** A coating requiring the addition of a separate reactive resin, commonly known as a catalyst or hardener, prior to application to form an acceptable dry film.

- 229 ~~ORGANIC COMPOUND: Any compound of carbon excluding carbon monoxide, carbon dioxide, carbonic acid, carbonates, and metallic carbides.~~
- 259 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 the viscosity is not considered a component.**
- 260 OPTICAL COATING: A coating applied to an optical lens.**
- 230 **261 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.**
- 231 **262 OVERVARNISH: ~~Any~~ A coating applied to a can to reduce the coefficient of friction, to provide gloss, or to protect the finish against abrasion and/or corrosion.**
- 263 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.**
- 232 **264 PAPER COATING: ~~Any~~ A coating applied on or impregnated into paper, including, but not limited to, adhesive tapes ~~and labels~~, book covers, post cards, office copier paper, and drafting paper ~~and pressure sensitive tapes~~.**
- 233 **265 PLASTIC: Substrates ~~containing~~ made from 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.**
- 266 PLEASURE CRAFT: Vessels which are manufactured or operated primarily for recreational purposes, or leased, rented, or chartered to a person or business for recreational purposes.**
- 267 PLEASURE CRAFT COATING: A marine coating that is applied to or intended by the manufacturer to be applied to pleasure craft.**
- 234 ~~POLYESTER AND POLYESTER RESIN: A complex, polymeric ester containing difunctional acids.~~
- 235 ~~POLYESTER COMPOSITE: Cured material made of polyester resin with reinforcing material imbedded in it, such as glass fibers.~~

- 268** **PREFABRICATED ARCHITECTURAL COMPONENT COATING:** A coating applied to metal parts and products which are to be used as an architectural structure.
- 269** **PRESSURE SENSITIVE TAPE OR LABEL:** A flexible strip of paper, backing material, or other material that is coated on one side with a permanently tacky adhesive which will adhere to a variety of surfaces with light pressure.
- 270** **PRETREATMENT COATING:** A coating containing no more than 12 percent solids by weight, and at least ½ 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.
- 271** **PRETREATMENT WASH PRIMER:** A coating that contains no more than 12 percent solids, by weight, and at least ½ percent acids, by weight, is used to provide surface etching, and is applied directly to fiberglass and metal surfaces to provide corrosion resistance and adhesion of subsequent coatings.
- ~~236~~ **272** **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.
- ~~237~~ **273** **QUALITY CLASS Q:** ~~Any~~ A system, structure, coating or other component ~~which that~~, if defective or inoperable, could cause or increase the severity of a nuclear incident, thereby imposing undue risk to the health and safety of the public.
- ~~238~~ **REFINISHING:** ~~Recoating a used object's surface which arrives at the refinisher with a coating or with a previous coating worn away by use.~~
- 274** **REFRIGERATED GLASS DOOR COATING:** A two-component coating or ink used for the manufacturing of refrigerated glass doors that forms a decorative or protective film and provides a substrate for bonding materials such as seals, spacers, and sealants.
- ~~239~~ **275** **REPAIR COATING:** A coating ~~or coating operation~~ used to recoat the portion of a completed finish that suffered post-production damage at the facility where the finish was applied.
- ~~240~~ **RESTRICTED SPRAY GUN:** ~~Any air atomizing spray gun that is not a low pressure spray gun, and any other coating gun that is not on the list in Section 303.1.~~

- 276** **SHOCK-FREE COATING:** A coating applied to electrical components to protect the user from electric shock. The coating has characteristics of being of low capacitance and high resistance, and having resistance to breaking down under high voltage.
- 241 **277** **SILICONE RELEASE COATING:** ~~Any~~ A resin coating, the major cured portion of which is silicone resin, having as its primary function the release of food products from metal surfaces such as baking pans.
- 242 **278** **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 ~~15 pounds (6.8 kg) per day and less than 2 tons/yr (1814 kg) per year;~~ as demonstrated by both adequate records of coating and diluent use (~~pursuant~~ according to Section ~~501.2~~ 501.2 of this rule) and a separate tally of the number of days each month ~~that~~ such coating operations occur.
- 279** **SOLAR-ABSORBENT COATING:** A coating with the prime purpose of absorption of solar radiation.
- 280** **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.
- 243 **281** **STRIPPABLE BOOTH COATING:** A temporary coating that is applied to spray booth surfaces to receive the overspray and protect the surfaces, and which is designed to readily be pulled off the substrate in strips or sheets, and disposed of.
- 244 **282** **SURFACE COATING:** ~~Any~~ A liquid, fluid, or mastic composition ~~which~~ 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.
- 245 **283** **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.
- 284** **TEXTURE COATING:** A coating that is applied which, in its finished form, consists of discrete raised spots of the coating.
- 246 **285** **THREE-PIECE CAN SIDE-SEAM COAT COATING:** ~~Any~~ A coating sprayed onto the interior and/or exterior of a can body seam on a three-piece can to protect the exposed metal.
- 247 **286** **TOPCOAT:** The final, permanent, ~~coating formulation~~ coating formulation that ~~completed~~ completes the finish on a surface.

248 ~~TOTAL VOC VAPOR PRESSURE (VOC COMPOSITE PARTIAL PRESSURE):~~ The sum of the partial pressures of the compounds defined as VOCs, calculated according to the formula in Section 504 of this rule.

249 **287 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.

288 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.

250 **289 TWO-PIECE CAN EXTERIOR END COAT COATING:** ~~Any~~ A coating applied to the exterior end of a can to provide protection to the metal.

290 VACUUM METALIZING COATING: The undercoat applied to the substrate on which metal is deposited or the overcoat applied directly to the metal film. Vacuum metalizing is the process of evaporating metals inside a vacuum chamber and then bonding the metals to the desired substrate to achieve a uniform metalized layer.

251 **291 VINYL COATING (COATING ON VINYL):** ~~Any~~ A decorative or protective coating or reinforcing coating applied over vinyl-coated textile fabric or vinyl sheets.

252 ~~VOC BORNE COATING:~~ A coating that contains more VOC than water, by weight.

253 ~~VOC BORNE DILUENT:~~ A solvent or other diluent that contains more VOC than water, by weight

254.2 **292 VOC ACTUAL: VOC CONTENT OF MATERIAL (MATERIAL VOC CONTENT)** ~~Actual includes the VOC Content minus all~~ The weight of volatile organic compounds minus the weight of water and minus the weight of exempt organic compounds divided by the total volume of the 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:

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

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 (Section 261) 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)

254 **293** **VOC CONTENT:** ~~In this rule, VOC content is determined by one of the following two formulas: To determine compliance with Table 1 or the 2.0 lb VOC/gal threshold in Section 302, use the following formula in subsection 255.1; For other purposes, use the formula in subsection 255.2:~~ The organic chemicals in a material that have a vapor pressure at ordinary room temperature. This vapor pressure results from a low boiling point, which causes large numbers of molecules to evaporate or sublime 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 and VOC Regulatory.

254.1 **294** **VOC REGULATORY:** ~~VOC Content Minus Exempt Compounds (is the same as VOC CONTENT MINUS EXEMPT EVAPORATING COMPONENTS)~~ The VOC content The weight of volatile organic compounds 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:

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

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)

SECTION 300 – STANDARDS

301 SURFACE COATINGS: ~~A person~~ An owner or operator shall comply with one of the following for all applications of surface coatings:

301.1 Meet the limits in ~~Table 1~~ Tables 336-1 through 336-7 of this rule. Coating limits are calculated as VOC Regulatory (as applied). Compliance will be determined based on the VOC content limit, as expressed in metric units. English units are provided for information only; or

301.2 Operate an Emission Control System (ECS) in accordance with ~~subsection 306.1~~ Section 305 of this rule when applying a coating that exceeds the VOC limits in ~~Table 1~~ Tables 336-1 through 336-7 of this rule.; ~~or All VOC coatings used that exceed the VOC limits in Tables 336-1 through 336-7 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~~

301.3 Qualify for an exemption under ~~Section 305~~ Sections 103 or 104 of this rule.

TABLE 1

SURFACE COATING EMISSION LIMITS		
TYPE OF SURFACE COATING Column I	LIMITS AS APPLIED: VOC content minus exempt compounds (see subsection 255.1)	
	Column II lbs/gal g/liter	
Can Coating		
Sheet Basecoat (Exterior and Interior) and Overvarnish	2.8	340
Two Piece Can Exterior (Basecoat and Overvarnish)	2.8	340

Two and Three Piece Can Interior Body Spray	4.2	510
Two Piece Can Exterior End (Spray or Roll Coat)	4.2	510
Three Piece Can Side Seam Spray	5.5	660
End Sealing Compound	3.7	440
Can Printing Ink	2.5	300
Coil Coating (any coat)	2.6	310
Metal Furniture Coating	3.0	360
Large Appliance Coating	2.8	340
OTHER METAL PARTS AND PRODUCTS COATING (As defined in Section 231)		
The following includes Non-adhesive Coating, Adhesive, Adhesive Primer, Caulking, and Beaded Sealants:		
Air Dried Coating	3.5	420
Baked Coating [above 200°F (93°C)]	3.0	360
Silicone Release Coating: Baked or Air Dried	3.5	420
Fabric Coating	2.9	350
Film Coating	2.9	350
COATING PLASTIC PARTS AND PRODUCTS THAT ARE NOT DEFINED AS FLEXIBLE	3.5	420
COATING FLEXIBLE PLASTIC PARTS AND PRODUCTS		
Primer	4.1	490
Color Topcoat	3.8	450
Basecoat/Clear Coat (Combined System) – Limit for either coat	4.5	540
Paper Coating, including Adhesives	2.9	350
Vinyl Coating (Coating on Vinyl)	3.8	450
STRIPPABLE BOOTH COATINGS	2.0	240

Table 336-1: Coating Limits for Metal Parts and Products

<u>Coating Category</u>	<u>Air Dried</u>		<u>Baked</u>	
	<u>g VOC/l</u>	<u>lb VOC/gal</u>	<u>g VOC/l</u>	<u>lb VOC/gal</u>
<u>Camouflage</u>	<u>420</u>	<u>3.5</u>	<u>420</u>	<u>3.5</u>
<u>Drum Coating, New, Exterior</u>	<u>340</u>	<u>2.8</u>	<u>340</u>	<u>2.8</u>
<u>Drum Coating, New, Interior</u>	<u>420</u>	<u>3.5</u>	<u>420</u>	<u>3.5</u>
<u>Drum Coating, Reconditioned, Exterior</u>	<u>420</u>	<u>3.5</u>	<u>420</u>	<u>3.5</u>
<u>Drum Coating, Reconditioned, Interior</u>	<u>500</u>	<u>4.2</u>	<u>500</u>	<u>4.2</u>
<u>Electric-Insulating Varnish</u>	<u>420</u>	<u>3.5</u>	<u>420</u>	<u>3.5</u>
<u>Etching Filler</u>	<u>420</u>	<u>3.5</u>	<u>420</u>	<u>3.5</u>
<u>Extreme High-Gloss</u>	<u>420</u>	<u>3.5</u>	<u>360</u>	<u>3.0</u>
<u>Extreme Performance</u>	<u>420</u>	<u>3.5</u>	<u>360</u>	<u>3.0</u>
<u>Heat-Resistant</u>	<u>420</u>	<u>3.5</u>	<u>360</u>	<u>3.0</u>
<u>High Performance Architectural</u>	<u>740</u>	<u>6.2</u>	<u>740</u>	<u>6.2</u>
<u>High Temperature</u>	<u>420</u>	<u>3.5</u>	<u>420</u>	<u>3.5</u>
<u>Metallic</u>	<u>420</u>	<u>3.5</u>	<u>420</u>	<u>3.5</u>
<u>Military Specification</u>	<u>340</u>	<u>2.8</u>	<u>280</u>	<u>2.3</u>
<u>Mold-Seal Coating</u>	<u>420</u>	<u>3.5</u>	<u>420</u>	<u>3.5</u>
<u>Multi-Component</u>	<u>340</u>	<u>2.8</u>	<u>280</u>	<u>2.3</u>
<u>One-Component</u>	<u>340</u>	<u>2.8</u>	<u>280</u>	<u>2.3</u>
<u>Other Metal Parts and Products: Includes Non-Adhesive Coating, Adhesive, Adhesive Primer, Beaded Sealant, and Caulking</u>	<u>420</u>	<u>3.5</u>	<u>360</u>	<u>3.0</u>
<u>Pan Backing</u>	<u>420</u>	<u>3.5</u>	<u>420</u>	<u>3.5</u>
<u>Prefabricated Architectural Multi- Component</u>	<u>420</u>	<u>3.5</u>	<u>280</u>	<u>2.3</u>
<u>Prefabricated Architectural One- Component</u>	<u>420</u>	<u>3.5</u>	<u>280</u>	<u>2.3</u>

<u>Coating Category</u>	<u>Air Dried</u>		<u>Baked</u>	
	<u>g VOC/l</u>	<u>lb VOC/gal</u>	<u>g VOC/l</u>	<u>lb VOC/gal</u>
<u>Pretreatment Coating</u>	<u>420</u>	<u>3.5</u>	<u>420</u>	<u>3.5</u>
<u>Repair</u>	<u>420</u>	<u>3.5</u>	<u>360</u>	<u>3.0</u>
<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>
<u>Strippable Booth Coating</u>	<u>240</u>	<u>2.0</u>	=	=
<u>Touch-up</u>	<u>420</u>	<u>3.5</u>	<u>360</u>	<u>3.0</u>
<u>Vacuum Metalizing</u>	<u>420</u>	<u>3.5</u>	<u>420</u>	<u>3.5</u>

Table 336-2: Coating Limits for Cans and Coils

<u>Coating Category</u>	<u>g VOC/l</u>	<u>lb VOC/gal</u>
<u>Strippable Booth Coating (applies to both can and coil coating categories)</u>	<u>240</u>	<u>2.0</u>
<u>Can Coating</u>		
<u>Can Printing Ink</u>	<u>300</u>	<u>2.5</u>
<u>End Sealing Compound</u>	<u>440</u>	<u>3.7</u>
<u>Sheet Basecoat (Exterior and Interior) and Overvarnish</u>	<u>340</u>	<u>2.8</u>
<u>Three-Piece Can Side-Seam Spray</u>	<u>660</u>	<u>5.5</u>
<u>Two and Three-Piece Can Interior Body Spray</u>	<u>510</u>	<u>4.2</u>
<u>Two-Piece Can Exterior (Basecoat and Overvarnish)</u>	<u>340</u>	<u>2.8</u>
<u>Two-Piece Can Exterior End (Spray or Roll Coat)</u>	<u>510</u>	<u>4.2</u>
<u>Coil Coating</u>	<u>310</u>	<u>2.6</u>

Table 336-3: Coating Limits for Plastic Parts and Products

<u>Coating Category</u>	<u>g VOC/l</u>	<u>lb VOC/gal</u>
<u>Electric Dissipating Coatings and Shock-Free Coatings</u>	<u>800</u>	<u>6.7</u>
<u>Extreme Performance</u>	<u>420</u> <u>(2-pack coatings)</u>	<u>3.5</u> <u>(2-pack coatings)</u>

Flexible Plastic Parts and Products

<u>Coating Category</u>	<u>g VOC/l</u>	<u>lb VOC/gal</u>
<u>Basecoat</u>	<u>540</u>	<u>4.5</u>
<u>Clearcoat</u>	<u>540</u>	<u>4.5</u>
<u>Color Topcoat</u>	<u>450</u>	<u>3.8</u>
<u>Primer</u>	<u>490</u>	<u>4.1</u>
<u>Metallic</u>	<u>420</u>	<u>3.5</u>
<u>Military Specification</u>	<u>340 (1 pack)</u>	<u>2.8 (1 pack)</u>
	<u>420 (2 pack)</u>	<u>3.5 (2 pack)</u>
<u>Mold-Seal Coating</u>	<u>760</u>	<u>6.3</u>
<u>Multi-Colored Coating</u>	<u>680</u>	<u>5.7</u>
<u>Multi-Component</u>	<u>420</u>	<u>3.5</u>
<u>One-Component</u>	<u>280</u>	<u>2.3</u>
<u>Optical Coatings</u>	<u>800</u>	<u>6.7</u>
<u>Plastic Parts and Products That Are Not Defined As Flexible</u>	<u>420</u>	<u>3.5</u>
<u>Strippable Booth Coating</u>	<u>240</u>	<u>2.0</u>
<u>Vacuum Metalizing</u>	<u>800</u>	<u>6.7</u>

Table 336-4: Coating Limits for Business Machines

<u>Coating Category</u>	<u>g VOC/l</u>	<u>lb VOC/gal</u>
<u>Fog Coat</u>	<u>260</u>	<u>2.2</u>
<u>Primer</u>	<u>350</u>	<u>2.9</u>
<u>Repair</u>	<u>350</u>	<u>2.9</u>
<u>Strippable Booth Coating</u>	<u>240</u>	<u>2.0</u>
<u>Texture Coating</u>	<u>350</u>	<u>2.9</u>
<u>Topcoat</u>	<u>350</u>	<u>2.9</u>
<u>Touch-up</u>	<u>350</u>	<u>2.9</u>

Table 336-5: Coating Limits for Metal Furniture and Large Appliances

<u>Coating Category</u>	<u>Air Dried</u>		<u>Baked</u>	
	<u>g VOC/l</u>	<u>lb VOC/gal</u>	<u>g VOC/l</u>	<u>lb VOC/gal</u>
<u>Extreme High Gloss</u>	<u>340</u>	<u>2.8</u>	<u>360</u>	<u>3.0</u>
<u>Extreme Performance</u>	<u>420</u>	<u>3.5</u>	<u>360</u>	<u>3.0</u>
<u>Heat-Resistant</u>	<u>420</u>	<u>3.5</u>	<u>360</u>	<u>3.0</u>
<u>Metallic</u>	<u>420</u>	<u>3.5</u>	<u>420</u>	<u>3.5</u>
<u>Multi-Component</u>	<u>340</u>	<u>2.8</u>	<u>275</u>	<u>2.3</u>
<u>One-Component</u>	<u>275</u>	<u>2.3</u>	<u>275</u>	<u>2.3</u>
<u>Pretreatment Coating</u>	<u>420</u>	<u>3.5</u>	<u>420</u>	<u>3.5</u>
<u>Refrigerated Glass Door Coating</u>	<u>480</u>	<u>4.0</u>	=	=
<u>Solar-Absorbent</u>	<u>420</u>	<u>3.5</u>	<u>360</u>	<u>3.0</u>
<u>Strippable Booth Coating</u>	<u>240</u>	<u>2.0</u>	=	=

Table 336-6: Coating Limits for Paper, Fabric, Film, Foil, and Vinyl

<u>Coating Category</u>	<u>kg VOC/kg Coating</u> <u>(lb VOC/lb solids)</u>	<u>kg VOC/kg Solids</u> <u>(lb VOC/lb solids)</u>	<u>g VOC/l</u>	<u>lb VOC/gal</u>
<u>Fabric</u>	=	=	<u>350</u>	<u>2.9</u>
<u>Paper, Film, and Foil Surface Coating (Not Including Pressure Sensitive Tape and Label)</u>	<u>0.08</u>	<u>0.40</u>	=	=
<u>Pressure Sensitive Tape and Label Surface Coating</u>	<u>0.067</u>	<u>0.20</u>	=	=
<u>Strippable Booth Coating</u>	=	=	<u>240</u>	<u>2.0</u>

<u>Coating Category</u>	<u>kg VOC/kg Coating</u> <u>(lb VOC/lb solids)</u>	<u>kg VOC/kg Solids</u> <u>(lb VOC/lb solids)</u>	<u>g VOC/l</u>	<u>lb VOC/gal</u>
Vinyl	=	=	450	3.8

Table 336-7: Coating Limits for Pleasure Craft

<u>Coating Category</u>	<u>g VOC/l</u>	<u>lbs VOC/gal</u>
<u>All Other Pleasure Craft Surface Coatings for Metal or Plastic</u>	<u>420</u>	<u>3.5</u>
<u>Aluminum Substrate Antifoulant Coating</u>	<u>560</u>	<u>4.7</u>
<u>Extreme High Gloss Topcoat</u>	<u>600</u>	<u>5.2</u>
<u>Finish Primer/Surfacer</u>	<u>600</u>	<u>5.2</u>
<u>High Build Primer/Surfacer</u>	<u>340</u>	<u>2.8</u>
<u>High Gloss Topcoat</u>	<u>420</u>	<u>3.5</u>
<u>Other Substrate Antifoulant Coating</u>	<u>400</u>	<u>3.4</u>
<u>Pretreatment Wash Primer</u>	<u>780</u>	<u>6.5</u>
<u>Strippable Booth Coating</u>	<u>240</u>	<u>2.0</u>

302 APPLICATION METHODS FOR SURFACE COATINGS:

302.1 ~~A person~~ An owner or operator shall ~~employ~~ 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):

~~302.1~~ **a.** ~~A~~ HVLP spray gun; ~~or~~

~~302.2~~ **b.** ~~An~~ Electrostatic system; ~~or~~

~~302.3~~ **c.** A system that atomizes principally by hydraulic pressure, including “airless” and “air assisted airless”;

~~302.4~~ **d.** ~~HVLP Spray Gun; Non-atomizing or non-spraying application methods, such as but not limited to dipping, rolling, or brushing; or~~ Hand application methods, including but not limited to;

e. **(1)** Flow Coat;

- f. ~~(2) Roll Coat;~~
- g. ~~(3) Dip-Coating;~~
- h. ~~Hand Application Methods;~~

302.5 **e. An Alternative Application Method:** Any method approved by the Administrator ~~of the Federal EPA or the Control Officer as having a transfer efficiency of 65% or greater as~~ HVLP-equivalent.

302.2 An owner or operator is allowed to use an application method other than that described in Section 302.1 of this rule:

- a. For applications of surface coating materials containing less than or equal to 2 pounds of VOC per gallon (240 g/L), minus exempt compounds (VOC Regulatory).
- b. For applications of surface coating materials containing more than 2 pounds of VOC per gallon (240 g/L), minus exempt compounds (VOC Regulatory):
 - (1) If VOC emissions from the finishing application are captured and directed to an ECS complying with the provisions of Section 305 of this rule; or
 - (2) If coating the inside of pipes and tubes with a wand-style applicator; or
 - (3) If 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, touch-up, and/or repair.

303 **CLEANUP OF APPLICATION EQUIPMENT:** ~~A person~~ An owner or operator shall comply with the following when using VOC-containing material to clean application equipment:

303.1 ~~Disassemble any spray gun and other application equipment and clean it in:~~

- a. ~~A container 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; or~~
- b. ~~A commercially sold gun cleaning machine which shall be operated and maintained as stipulated in the Air Pollution Permit's Operation and Maintenance (O&M) Plan, or in the absence of its mention in the O&M Plan, according to manufacturer's or distributor's instructions.~~

303.2 ~~Vapor Pressure Limits: Any person subject to this rule using VOC solvent to clean coating application equipment shall use only solvent which, as used, has a VOC vapor pressure below 35 mm Hg at 20° C (68° F), except for sprayless equipment exempted pursuant to subsection~~

303.1 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 Section 303.2 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)** 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.

(h) Porous Material:

- (i)** Do not clean nor use porous or absorbent materials to clean parts or products in a cleaning machine. For the purpose of this rule, porous or absorbent materials include, but are not limited to, cloth, leather, wood, and rope.
- (ii)** Do not place an object with a sealed wood handle, including a brush, in or on a cleaning machine.
- (iii)** Do not place porous or absorbent materials, including, but not limited to, cloth, leather, wood, and rope in or on a cleaning machine.

(2) Automatic Spray-Gun Cleaning Machine: An automatic spray-gun cleaning machine shall have a self-covering or enclosing cover feature 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: A non-automatic remote reservoir Spray-Gun Cleaning Machine 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;

(b) Machine reservoir shall not have cumulative total openings, including the drain opening(s) exceeding two square inches in area; and 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 may function 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 Section 303.1(b)(3)(b) of this rule.

303.2 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. If disassembled spray-guns must be are soaked in a vat which they shall remain covered at all times, except when the application equipment is being handled in the container or transferred into or out of the container;

304 **HANDLING AND DISPOSAL OF VOC:**

304.1 Use And Storage: A person 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.

304.2 Disposal Of VOC And VOC-Containing Material: A person 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, leakfree containers which are legibly labeled with their contents and which remain covered when not in use.~~

304 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 manner that prevents the evaporation of VOC to the atmosphere. Work practices limiting VOC emissions include, but are not limited to, all of the following:

304.1 Use and Storage: An owner or operator shall cover and keep covered each VOC-containing material which is not currently in use. An owner or operator shall store finishing and cleaning materials in closed or covered leak-free containers.

304.2 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 remain covered with a leak tight cover, when not in use.

304.3 Minimize spills of VOC-containing coatings, thinners, and coating-related waste materials.

304.4 Convey VOC-containing coatings, thinners, and coating-related waste materials from one location to another in closed containers or pipes.

304.5 Containers in which VOC-containing materials are stored must have a legible label identifying the container's contents.

305 **EXEMPTIONS:**

305.1 Categorical Exemptions: This rule does not apply to the following operations:

- ~~a. Aerospace coating operations (Rule 348).~~
- ~~b. Architectural coating, including buildings and erected structures (Rule 335).~~
- ~~c. Cleaning: VOC loss from cleaning or stripping a surface for coating or other purpose is regulated by Rule 331.~~
- ~~d. Marine vessel exterior refinishing.~~
- ~~e. Polyester coatings applied to polyester composites.~~
- ~~f. Printing and graphic arts coating (Rule 337).~~
- ~~g. Semiconductor manufacturing (Rule 338).~~

- h. ~~Coating a highway vehicle or mobile equipment (Rule 345).~~
- i. ~~Wood: Coating Wood Furniture (Rule 342); Coating Wood Millwork (Rule 346).~~

305.2 Exemptions for Qualified Materials: Rule 336 does not apply to the following materials that meet the specific qualification(s) and limitation(s) set forth herein:

- a. ~~Leak Preventing Materials: Sealants, adhesives, 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) ~~Used substrates, post manufacture, such as, but not limited to, old joints and seals on pipe and valve assemblies.~~
- b. ~~Adhesive Use:~~
 - (1) ~~Adhesive and adhesive primer applications are exempt from this rule, except for the 2 categories that appear in Table 1, namely adhesive materials applied to other metal parts and products (as defined in Section 231), and adhesives used in paper coating (as defined in Section 233).~~
 - (2) ~~Any adhesive exempted by this Rule 336 and to which no other rule in Regulation III specifically applies shall comply with the provisions of Rule 330 (Volatile Organic Compounds) of these Rules & Regulations.~~
- e. ~~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 as defined in Section 231 of this rule, or in the manufacturing of cans.~~
- d. ~~Extreme Performance Coatings: Extreme performance coatings are exempt from the VOC limits of Table 1 when used under the following conditions:~~
 - (1) ~~Used on internal combustion engine components that are normally above 250°F (121°C) during use; or~~
 - (2) ~~Used at temperatures above 250°F (121°C) on items that are both included under SIC (Standard Industrial Classification, 1987) codes 3661, 3663, 3669, 3677, 3678, 3679, or 3769 and are electronic products in space vehicles and/or are communications equipment.~~

~~The US Government Printing Office “Standard Industrial Classification Manual, 1987”~~

(and no future editions) is incorporated by reference and is on file at the Maricopa County Air Quality Department, 1001 N. Central Ave., Phoenix, Arizona 85004.

305.3 ~~ECS Use In Lieu Of Equipment/Practice: In lieu of meeting an equipment or work practice standard within Sections 302, 303, or 304, an owner or operator is allowed to instead use an ECS that has a capture efficiency not less than 90% and meets all ECS requirements in Section 306.~~

305.4 ~~Spray Gun And VOC Limit Exemptions: The following are exempt from subsection 301.1, subsection 301.2, and Section 302 of this rule:~~

- a. ~~Coating with an aerosol can.~~
- b. ~~Touch up or repair coating operations as defined in Sections 250 and 240.~~
- c. ~~Low usage coatings which in aggregate of all formulations do not exceed 55 gallons (208 liters) per year facility wide if the operator updates usage records of these coatings on each day of their use, pursuant to subsection 501.2.~~
- d. ~~A small surface coating source (SSCS) as defined in Section 243. However, once a small surface coating source exceeds either the 15 lb per day or the 2 tons per year limits that are required to maintain SSCS status that facility is permanently subject to the limits of subsection 301.1, subsection 301.2, and Section 302, with the following exception:
 - (1) ~~For such a facility that does not have either a 15 lb/day or a 2 ton/year VOC emission limit in an Air Pollution Permit for processes regulated by this rule, an owner or operator may retain the exemption if s/he agrees in writing to enforceable permit conditions that establish these or stricter limits.~~
 - (2) ~~However, a facility that violates its permit limit of either 15 lbs VOC/day or 2 tons VOC/yr. for coating process regulated by this Rule 336 is permanently subject to the limits of subsections 301.1 and 301.2, and Section 302.~~~~
- e. ~~A Quality Class Q protective coating that is used on equipment, structures, and/or components within a containment facility of a nuclear power plant and is approved in accordance with either ANSI standards N101.2 and N101.4 or with ASTM Standards D3911 and D3843.~~

- f. ~~A tactical military equipment coating that is approved in a Maricopa County Air Pollution Permit subsequent to a sufficient demonstration by the user that no compliant substitute exists.~~

305.5 ~~Special Facilities/Operations:~~

- a. ~~Silicone Release Coatings: Silicone release coating operations controlled by an ECS pursuant to subsection 301.2 are exempt from the 85 percent overall control efficiency requirement if the ECS demonstrates at least 70 percent overall control and the coating is applied with a liquid seal air spray system.~~
- b. ~~Bonding Impact Resistant Rubber Lining To Metal: An adhesive and an adhesive primer are exempt from Table 1 limits, but shall not have a VOC content of material exceeding 850 grams of VOC per liter (7.1 lb/gal), if such adhesive is used to bond sheets/strips of rubber to metal equipment so that such rubber sheathing directly contacts material received by the metal and so protects the metal. This exception does not apply to any other situations where adhesives are used to bond rubber to metal.~~

305.6 ~~Exemption Of Coating Applicator Cleanup: A person is allowed to use solvent that has at 20° C (68° F) a total VOC vapor pressure above 35 mm Hg for cleaning coating application equipment, but only if such application equipment does not use spray devices and the same principal solvent is used for cleaning as is used in the coating.~~

305.7 ~~Low Usage Allowance for Restricted Guns: A person may employ spray guns otherwise prohibited by Section 302 for use with coatings over 2 lb VOC /gal under the following limited conditions:~~

- a. ~~If VOC emissions from the finishing application station, are captured and directed to an ECS complying with the provisions of Section 306.~~
- b. ~~To coat the inside of pipes and tubes with a wand style applicator.~~
- c. ~~Using an airbrush or other small gun that has a reservoir capacity not exceeding 250 cc (8.8 fluid ounces) and is used solely for detailing, lettering, touchup, and/or repair.~~

306 **305** **REQUIREMENTS FOR AIR POLLUTION CONTROL EQUIPMENT AND EMISSION CONTROL SYSTEM (ECS) MONITORING EQUIPMENT REQUIREMENTS:**

- 306.1 ~~ECS Control Efficiencies: To meet the requirements pursuant to subsection 301.2, subsection 305.3, or subsection 305.7, an ECS shall be operated as follows:~~
- a. ~~Overall ECS Efficiency: Overall, the ECS shall prevent at least 85% of the mass of the VOC emitted by each coating or process so controlled from entering the atmosphere except as successfully controlled pursuant to the alternative in subsection 306.1c(2).~~
 - b. ~~Capture Efficiencies:~~
 - (1) ~~For an ECS used pursuant to subsection 301.2 and/or subsection 305.7, capture shall be at least 87%.~~
 - (2) ~~For an ECS used pursuant to subsection 305.3, capture shall be at least 90%.~~
 - c. ~~Control Efficiency Of The Emissions Processing Subsystem:~~
 - (1) ~~The emissions processing subsystem of the ECS shall reduce the mass of VOC entering it by at least 90 percent; or~~
 - (2) ~~Alternative for Very Dilute Input: For VOC input concentrations of less than 100 ppm (as carbon) at the inlet of the ECS 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 85% when tested pursuant to subsection 503.3 at VOC input concentrations exceeding 100 ppm (as carbon).~~
 - d. ~~Coating that exceeds the applicable VOC limits in Table 1 shall be clearly identified such that coating operators are informed an ECS must be used.~~

305.1 ECS Control Efficiencies: To meet the requirements pursuant to Section 301.2 of this rule, an ECS shall be operated as follows:

- a. **Overall ECS Efficiency:** The overall control efficiency of an ECS shall be determined by multiplying the capture efficiency by the destruction efficiency of the control device expressed as a percentage. An owner or operator, who chooses to use an ECS instead of

meeting the limits in Tables 336-1 through 336-7 of this rule and specified application methods, shall operate an ECS that has a 90 percent overall ECS efficiency.

- b. Alternative for Very Dilute Input:** For VOC input-concentrations of less than 100 ppm (as 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.

~~306.2~~ **305.2** **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 ~~that are~~ used pursuant to this ~~Rule 336 rule~~ or to ~~an air pollution control permit~~ a Maricopa County Air Pollution 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 ~~that is~~ used pursuant to this ~~Rule 336 rule~~.
- c.** The owner or operator shall comply with all ~~the~~ identified actions and schedules provided in each O&M Plan.

~~306.3~~ **305.3** **Providing and Maintaining ECS Monitoring Devices:** ~~Any person~~ An 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 Section 502 ~~of this rule~~ which demonstrate that the ECS meets the overall control standard required by ~~subsection~~ ~~306.1~~ Section 305.1 of this rule and is operated in accordance with the equipment manufacturer's specifications.

~~306.4~~ **305.4** **O&M Plan Responsibility:** An owner or operator of a facility that is required to have an O&M Plan pursuant to ~~subsection 306.2~~ Section 305.2 of this rule 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 Maricopa County Air Quality Department.~~

305.5 Operation and Maintenance (O&M) Plan Contents for an ECS: ~~An O&M Plan for any ECS~~

~~including any ECS monitoring devices shall include all of the following information:~~

- ~~a. ECS equipment manufacturer;~~
- ~~b. ECS equipment model;~~
- ~~c. 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~~
- ~~d. Information required by Sections 502 and 503 of this rule.~~

SECTION 400 – ADMINISTRATIVE REQUIREMENTS

401 COMPLIANCE SCHEDULE VOC LIMITS:

401.1 Emission Control System (ECS): ~~By August 1, 1999: An owner or operator installing an ECS shall:~~

- ~~a. All new Implement all recordkeeping provisions ~~shall be in effect~~, including ~~subsections 501.1e and 501.2a~~ Section 502 of this rule.~~
- ~~b. Announce the The intention to use an Emission Control System (ECS) ~~shall be announced to~~ the Control Officer in writing if:
 - ~~(1) The the ECS is used as an alternative to meeting the spray gun provisions VOC limits of Section 302 301.1 of this rule. ~~or~~~~
 - ~~(2) The ECS is used as an alternative to meeting the gun cleaning machine provisions of Section 303.~~~~

~~401.2 Spray Guns: By November 1, 1999 —, the following shall be in continuing use:~~

- ~~a. Spray guns required pursuant to Section 302;~~
- ~~b. Cleaning solvent(s) having the required vapor pressure pursuant to Section 303, and the data sheet(s) confirming the vapor pressure.~~

~~401.3 By May 1, 2000, the ECS announced pursuant to subsection 401.1b shall be in continuing use.~~

401.2 VOC Limits and Rule Requirements: Upon adoption of this rule, the owner or operator shall discontinue purchase of materials that are non-compliant with Section 301.1 of this rule. The owner or operator has up to May 2, 2017 to complete use of existing non-compliant materials already purchased. A schedule for phasing out non-compliant materials shall be prepared and made available to an inspector upon request. This schedule shall specify that only compliant materials will be used after May 2, 2017.

402 COMPLIANCE SCHEDULE O&M PLAN: O&M Plans for ECS equipment subject to this rule shall be revised/updated by February 2017. The Control Officer shall notify the applicant in writing of approval or denial.

SECTION 500 – MONITORING AND RECORDS

501 RECORDKEEPING AND REPORTING: Any person subject to this rule shall comply with the following requirements of subsections 501.1 and 501.2 that apply to materials regulated by this Rule 336. Records shall be retained for 5 years and shall be made available to the Control Officer upon request. An owner or operator shall comply with the following recordkeeping requirements:

501.1 Records shall be retained for five years and shall be made available to the Control Officer without delay upon verbal or written request.

501.1 501.2 Current Lists: Maintain a current list of coatings or any other VOC-containing materials regulated by this rule. The list:

- a. ~~Maintain a current list of coatings, adhesives, reducers, thinners, gun-cleaning materials, additives, and any other VOC-containing materials regulated by this rule; give the VOC content of material for each as received (before thinning). A complete, neat assemblage of this data meets the requirements for a list. Express VOC content in 1 of 3 forms: pounds VOC per gallon, grams VOC per liter, or the percent VOC by weight along with the specific gravity or density. (2 numbers are required).~~
- b. ~~Less Stringent Recordkeeping for Consistently Low Users: An operator of a facility that always uses less than 2 gallons per day total of thinner and coating (listed in Table 1), meets the listing and recording requirements of subsections 501.1a, 501.1e, and 501.2 if:~~
 - (1) ~~All purchase receipts/invoices of VOC-containing material that is regulated by this rule for the most recent 12 months are kept together; and~~

- (2) ~~Current data sheets show the VOC content of material for every VOC containing substance currently used that is regulated by this rule.~~
- e. ~~Facilities That Are Not Small Surface Coating Sources: Facilities that are not small surface coating sources shall do the following:~~
- (1) ~~Coatings: For all coatings (except those recorded under the subsection 305.4c low usage allowance), make the following listings for coatings and adhesives that have VOC limits in Table 1:~~
- (a) ~~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 VOC content which the manufacturer states the coating will have once you have mixed all the necessary parts together in the proportions specified by the manufacturer.~~
- (b) ~~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:~~
- (i) ~~The maximum number of fluid ounces thinner/reducer that you ever add to a gallon of unreduced coating (or maximum g/liter), and the maximum fluid ounces of every other additive you mix into a gallon of the coating; or~~
- (ii) ~~The VOC content of the coating, after adding the maximum amount of thinner/reducer and other additives that you would ever add, as determined by the formula in subsection 255.1.~~
- (2) ~~Applicator Cleanup Solvent: Have a hardcopy of the VOC vapor pressure (VP) at 20°C (68°F) of solvent(s) used to clean spray guns, hoses, reservoirs, and any other coating application equipment. Any one of the following ways of providing the VP data is sufficient:~~
- (a) ~~A current manufacturer's technical data sheet;~~
- (b) ~~A current manufacturer's safety data sheet (MSDS);~~
- (c) ~~Actual test results; or~~
- (d) ~~A letter signed by an official or lab manager of the supplying facility.~~

- a.** Shall express VOC content in one of the following 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.
- b.** Shall have the written value of the VOC coating, in one of the following forms. The documentation must provide accurate VOC content values or be based on enforceable test methods as approved by the Administrator to determine the VOC content.
- (1)** A manufacturer's technical data sheet;
 - (2)** A manufacturer's safety data sheet (SDS or MSDS); or
 - (3)** Actual test results.
- c.** Shall maintain usage or purchase records as follows:
- (1) Monthly:** Records of the amount of VOC-containing materials purchased or used shall be totaled by the end of the month for the previous month. This includes, but is not limited to, all coating materials, all materials added during preparation of coatings, all materials used to clean coating application equipment, and all materials used to clean coating application areas.
 - (2) Grouping by VOC Content:** For purposes of recording usage, an owner or operator may give VOC coatings, cleaners, and solvents of similar VOC content (VOC Regulatory) 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 owner or 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 (VOC Regulatory) among the members of that group, rounded to the nearest tenth of a pound of VOC per gallon of material or to the nearest gram VOC per liter of material.
- d.** Shall make the following listings for all coatings that have VOC limits listed in Tables 336-1 through 336-7 of this rule:

(1) VOC Before Reducing: The VOC content of each coating as received, minus exempt compounds. List the manufacturer's final VOC content as mixed in the proportions specified by the manufacturer.

(2) List Maximum VOC Content of Coating as Applied: For each coating that is thinned/reduced or additive is introduced, record in a permanent log the VOC content, after mixing the maximum amount of thinner/reducer and other additives, as determined by the formula in the definition of VOC Regulatory of this rule. This log will include 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 as determined by the formula in the definition of VOC Regulatory in this rule.

e. Shall maintain usage or purchase records for aerosol can spray coating, including VOC content.

501.2 ~~Frequency of Updating Usage or Purchase Records: Update your records, showing the type and amount used of each VOC-containing coating or adhesive which is regulated by name or type in Table 1, and update each VOC-containing material, related to surface coating, that is not addressed by Table 1. This includes, but is not limited to, thinners, surfacers, and diluents.~~

~~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,~~

~~(1) **Monthly:** Monthly update records of each coating used that complies with the VOC limits in Table 1. Complete a month's update by the end of the following month.~~

(2) Daily: Daily update the usage of each coating that exceeds its limits in Table 1, including coating exempted by subsection 305.4c.

501.3 Grouping By VOC Content: For purposes of recording usage, coatings and adhesives that are in the same category in Table 1, and have similar VOC content, may be recorded under a name that includes the category name. 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.

502 **ECS RECORDING REQUIREMENTS:** An owner or operator shall maintain all of the following records in accordance with an approved O&M Plan for any ECS:

502.1 On each day an ECS is used at a facility pursuant to this rule, an owner or operator of the facility 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 336; 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 in which the O&M Plan requires that maintenance be done.

502.2 An explanation shall be entered for scheduled maintenance that is not performed during the period designated for it in the O&M Plan.

502.1 On each day an ECS is used at a facility pursuant to this rule, the owner or operator shall make a permanent record of the key system operating parameters as required by the O&M Plan including, but not limited to, the following:

- a.** Flow rates;
- b.** Pressure drops;
- c.** Temperature; or
- d.** Other operating conditions necessary to determine if the approved ECS is functioning properly.

502.2 An explanation shall be recorded for periods of time an approved ECS is not operating.

502.3 For each day or period the O & M Plan requires maintenance, the owner or operator shall make a permanent record of the maintenance actions taken within 24 hours of the maintenance completion.

502.4 Corrective action taken, if any.

502.5 An explanation shall be entered for scheduled maintenance that is not performed during the period designated for it in the O&M Plan.

503 **COMPLIANCE DETERMINATION AND TEST METHODS:** ~~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.~~

503.1 **Compliance Determination:** The following means shall be used to determine compliance with this rule.

a. Measurement of VOC content of materials subject to Section 301 or Section 302 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 ~~subsection 503.2f~~ Sections 503.2(f) of this rule (BAAQMD Method 31 [April 15, 1992]) or ~~503.2g~~ 503.2(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 ~~subsection 503.2e~~ Sections 503.2(c) (EPA Method

24), ~~503.2f~~ 503.2(f) (BAAQMD Method 31 [April 15, 1992]) or ~~503.2g~~ 503.2(g) (SCAQMD Method 313-91 [April 1997]) of this rule.

(a) Plastisols, 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 ~~503.1a~~ Section 503.1(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 ~~503.1b~~ Section 503.1(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 ~~subsection 503.2b~~ Section 503.2(b) of this rule, or EPA Method 25 and its submethod, referred to in ~~subsection 503.2d~~ Section 503.2(d) of this rule.

c. Capture efficiency of an ECS shall be determined either by the methods in ~~503.2e~~ Section 503.2(e) of this rule (EPA Method 204 and its submethods), or by using mass balance calculation methods in concert with the methods in ~~503.2a~~ Section 503.2(a) of this rule (EPA Methods 2, 2a, 2c, and 2d).

d. Measurement of air pressure at the center of the spray gun tip ~~and air horns~~ of an air-atomizing spray gun (~~reference subsection 302.1: Section 225~~) 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).

503.2 Compliance Determination-Test Methods ~~Adopted~~ **Incorporated by Reference:** The following test methods are approved for use for the purpose of determining compliance with this rule. The test methods ~~The EPA test methods as they exist in the Code of Federal Regulations (CFR) (July 1, 1998), as listed below, are adopted~~ are incorporated by reference in Appendix G of the

Maricopa County Air Pollution Control Regulations. 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. Copies of test methods referenced in this Section 503 are available at the Maricopa County Air Quality Department, 1001 N. Central Ave., Phoenix, AZ, 85004. Alternative test methods as approved by the Administrator or other EPA-approved test methods may be used upon prior written approval from the Control Officer. When more than one test method is permitted for the same determination, an exceedance under any method will constitute a violation. Copies of test methods referenced in this section are available at the Maricopa County Air Quality Department, 1001 N. Central Avenue, Suite 125, Phoenix, AZ 85004-1942.

- 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 (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 (April 15, 1992), “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).

503.3 Test Methods for ECS: For coatings/adhesives controlled pursuant to ~~subsection 302.4 or subsection Section 305.3~~ 305 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 25 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 ~~subsection 503.3(e)~~ Section 503.3(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 2d (40 CFR 60, Appendix A).

504 ~~FORMULA FOR TOTAL VOC VAPOR PRESSURE: Equivalent to: VOC COMPOSITE PARTIAL PRESSURE. Reference subsection 303.2~~

~~$$PP_c = \frac{\sum_{i=1}^n (W_i)(VP_i) / MW_i}{\frac{W_w}{18} + \sum_{j=1}^m \frac{W_{ej}}{MW_{ej}} + \sum_{i=1}^n \frac{W_i}{MW_i}}$$~~

W_i	=	Weight of the "i"th VOC compound in grams
W_w	=	Weight of water in grams
W_{ej}	=	Weight of the "j"th non-precursor compound in grams
MW_i	=	Molecular weight of the "i"th VOC compound in grams per gram mole, e.g., one gram mole of isopropyl alcohol weighs 60 grams
MW_{ej}	=	Molecular weight of the "j"th non-precursor compound, e.g., 1 gram mole of acetone weighs 58 grams
PP_c	=	VOC composite partial pressure at 20°C in mm mercury (Hg)
VP_i	=	Vapor pressure of the "i"th VOC compound at 20°C in mm Hg
18	=	Weight of one gram mole of water