



**Enhanced Regulatory Outreach Program
Maricopa County Air Quality Department**

Notice of Board of Health Meeting

Date/Time: Monday, April 23, 2018 at 3:00 p.m.

**Location: Board of Supervisors' Conference Room, 10th Floor
301 W. Jefferson Street, Phoenix, Arizona 85003**

The Maricopa County Board of Health will host a public meeting to approve expedited process rulemaking for Maricopa County Air Pollution Control Regulation III - **Rule 336 (Surface Coating Operations)**.

A summary of the rulemaking is described below. For more information, please visit: <http://www.maricopa.gov/3536/Active-Regulatory-Process>. Also, you may submit comments at: <http://www.maricopa.gov/FormCenter/Regulatory-Outreach-17/Citizen-Comments-94>. Thank you for participating in the rulemaking process.

AQ-2017-008-Rule 336 (Surface Coating Operations)

The Maricopa County Air Quality Department (department) is proposing to revise Rule 336 to:

- Incorporate VOC limits for coatings used in the production of metal cans (as recommended by the Environmental Protection Agency)
- Incorporate a definition and a VOC limit for Sheet Applied Rubber Lining Adhesives
- Make minor grammatical changes and correct typographical errors



**Report to the Board of Health
To Approve Expedited Process Rulemaking**
Prepared by the Maricopa County Air Quality Department

Case #/Title: AQ-2017-008-Rule 336

Meeting Date: April 23, 2018

Supervisor Districts: All Districts

Applicant: Staff

Request: Approve expedited process rulemaking for Maricopa County Air Pollution Control Regulation III - Rule 336 (Surface Coating Operations)

Discussion:

The Maricopa County Air Quality Department (MCAQD) is proposing to revise Rule 336 (Surface Coating Operations). The proposed revisions will lower the Volatile Organic Compound (VOC) limit for several categories of coatings used in the production of metal cans as requested by the Environmental Protection Agency (EPA); add a VOC limit for sheet applied rubber lining adhesives; and make minor grammatical changes to increase the clarity of the rule.

Maricopa County has been designated as nonattainment with respect to the 2008 National Ambient Air Quality Standard (NAAQS) for ozone since May 21, 2012. On May 4, 2016, the Maricopa County ozone nonattainment area was reclassified from "marginal" to "moderate" nonattainment. The Clean Air Act requires jurisdictions that are classified as "moderate" or higher nonattainment to implement Reasonably Available Control Technology (RACT) for sources of VOC, which are precursors to ozone formation. To implement RACT for surface coating operations, the MCAQD revised Rule 336 to incorporate the recommended control techniques published by the EPA in the following documents:

- "Control Techniques Guidelines For Metal Furniture Coatings" (EPA-453/R-07-005)
- "Control Techniques Guidelines For Large Appliance Coatings" (EPA-453/R-07-004)
- "Control Techniques Guidelines For Miscellaneous Metal And Plastic Parts Coatings" (EPA-453/R-08-003)
- "Control Techniques Guidelines For Paper, Film, And Foil Coatings" (EPA-453/R-07-003)
- "Control Techniques Guidelines: Industrial Cleaning Solvents" (EPA-453/R-06-001)

When Rule 336 was revised in 2016, the MCAQD evaluated the requirements for surface coating materials used in the production of metal cans. These requirements were not changed because the MCAQD determined that the existing control requirements in Rule 336 were at least as effective as the recommended control requirements for can coating published by the EPA in "Control Techniques Guidelines For Surface Coating of Cans, Coils, Paper, Fabrics, Automobiles, and Light-Duty Trucks" (Can Coating CTG). The revised rule was approved by the Board of Supervisors in November 2016 and was submitted to the EPA with the Ozone RACT State Implementation Plan (SIP) in December 2016.

In July 2017, the EPA informed the MCAQD that the Can Coating CTG no longer represents RACT because other nonattainment areas have incorporated lower VOC limits for can coating materials. As a result, the EPA asked the MCAQD to incorporate lower VOC limits for several categories of can coating materials. The MCAQD queried the emissions inventory and permitting databases and determined that there are two facilities in Maricopa County that are permitted to manufacture metal cans. Representatives from these facilities informed the MCAQD that they are already using can coating materials that comply with the VOC limits recommended by EPA. The MCAQD also identified 107 facilities with authority to operate under the General Permit for Surface Coating. An email survey was sent to each of these facilities to determine if there are any other can coating operations in Maricopa County. None

of the survey respondents indicated that they apply the types of can coating materials listed in Rule 336. Based on this analysis, the MCAQD is proposing to lower the VOC limits for the following categories of coatings applied to metal cans:

- End Sealing Compound
- Sheet Basecoat (Exterior and Interior) and Overvarnish
- Two and Three-Piece Can Interior Body Spray
- Two-Piece Can Exterior Basecoat and Overvarnish
- Two-Piece Can Exterior End (Spray or Roll Coat)

When the MCAQD evaluated RACT requirements in 2016, the department considered incorporating VOC limits for industrial adhesives in Rule 336. During the rulemaking process, the MCAQD determined that there were no facilities in Maricopa County to which the EPA recommended control techniques for industrial adhesives would apply. As a result, the MCAQD removed provisions for bonding impact resistant rubber lining to metal from Rule 336 and submitted a negative declaration to the EPA. After the rule was revised, the MCAQD received a letter from a stakeholder asking why these provisions had been removed. Further research indicated that one stakeholder in Maricopa County uses adhesives to bond impact resistant rubber to metal. As a result, the department is proposing to revise Rule 336 to incorporate a VOC limit for sheet applied rubber lining adhesives. The proposed VOC limit and application methods are consistent with the requirements of RACT rules for industrial adhesives in other jurisdictions.

The MCAQD is also proposing to make minor grammatical changes to increase the clarity of the rule and to ensure consistency within Rule 336 and with other MCAQD rules.

Support/Opposition:

The MCAQD has conducted one Stakeholder Workshop regarding Rule 336. At least two weeks prior to the workshop, the MCAQD posted a Notice of Stakeholder Workshop and a draft rule to the Enhanced Regulatory Outreach Program (EROP) website and sent an email to all stakeholders subscribed to the Air Quality Regulatory Process. While the MCAQD has received comments on the proposed changes, none of the stakeholders have expressed opposition to the rulemaking.

Department Recommendation: Approve expedited process rulemaking

Regulatory Process:

This regulatory change is following the EROP Policy and workflow process. The County Manager briefed the Board of Supervisors regarding this rulemaking in December 2017. A Stakeholder Workshop was held on March 8, 2018. If the Board of Health approves expedited process rulemaking, then the MCAQD will continue following the EROP Policy and workflow.

Presented By: Philip A. McNeely, R.G., Director

Prepared By: Planning and Analysis Division

Attachments: [Language of the proposed regulatory changes](#)
[Copies of all written and electronic Stakeholder input](#)
[County Manager Case Approval](#)



**MARICOPA COUNTY
AIR POLLUTION CONTROL REGULATIONS
REGULATION III – CONTROL OF AIR CONTAMINANTS**

**RULE 336
SURFACE COATING OPERATIONS**

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Revised 07/13/1988; Revised 09/21/1992; Revised 06/19/1996; Revised 04/07/1999; Revised 09/25/2013; Revised 11/02/2016; **Revised [Insert date of rule adoption]**

**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 coatings listed in Tables 336-1 through 336-7 of this rule that are not more specifically regulated by another source specific rule within Maricopa County Rules 300 to 359 of Regulation III, 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 Section 103 sets forth partial 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 0.15lb VOC/gal (18g/L) nor to solvents having a VOC content of material less than 0.15lb VOC/gal.

102.4 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.

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.~~ gallons per year of an individual non-compliant coating, and not exceeding 200 gal/yr. gallons per year 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.~~ gallons per year 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~~ gallons per year of coating.
- d. Extreme high gloss coatings for pleasure craft surface coating operations.

103.5 Application Methods and ~~VOC Limit~~ **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.~~ per year) 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/per 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 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.
- 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.
- 204 ~~AIR DRIED~~ AIR DRIED COATING:** A coating 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).
- 207 AS APPLIED:** The formulation of a coating immediately prior to its application after the addition of all thinner, reducer, and other additives.
- 208 BAKED COATING:** A coating that is dried or cured in an oven in which the oven temperature exceeds 200°F (93.3°C).

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- 208 **209 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 **209.1** Products classified as typewriters under SIC Code 3572;
- 208.2 **209.2** Products classified as electronic computing devices under SIC Code 3573;
- 208.3 **209.3** Products classified as calculating and accounting machines under SIC Code 3574;
- 208.4 **209.4** Products classified as telephone and telegraph equipment under SIC Code 3661;
- 208.5 **209.5** 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 **210 CAMOUFLAGE COATING:** A coating used, principally by the military, to conceal equipment from detection.
- 210 **211 CAN COATING:** 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.
- 211 **212 CAN PRINTING INK:** A fluid or viscous formulation used in can printing that imparts design, pattern, and/or alphanumeric symbols to a can.
- 212 **213 CLEAR COAT:** A coating that lacks color or opacity or is transparent.
- 213 **214 COATING APPLICATION EQUIPMENT:** Any equipment including, but not limited to, spray guns, wands, rollers, brushes used to apply or cover a surface with a coating for either aesthetic, protection or other purpose.
- 214 **215 COIL COATING:** A coating applied to the surface(s) of flat metal sheets or strips that is formed into rolls or coils not used to make cans.
- 215 **216 DAY:** A period of 24 consecutive hours beginning at midnight.
- 216 **217 DIP COATING:** A method of applying a coating to a substrate by submersion into and removal from a coating bath.
- 217 **218 DRUM COATING:** Coating of a cylindrical metal shipping container larger than 12 gallons capacity but no larger than 110 gallons capacity.
- 218 **219 ELECTRIC DISSIPATING COATING:** A coating that rapidly dissipates a high-voltage electric charge.
- 219 **220 ELECTRIC-INSULATING AND THERMAL-CONDUCTING COATING:** A coating that displays an electrical insulation of at least 1000 volts DC per mil on a flat test plate and an average thermal conductivity of at least 0.27 BTU per hour-foot-degree-Fahrenheit.
- 219 **221 ~~ELECTRIC INSULATING~~ 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 **222 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.
- 221 **223 ELECTROSTATIC SYSTEM:** A method of applying atomized paint by electrically charging the coating and the object being coated with opposing charges. A higher proportion of the coating reaches and coats the object than would occur in the absence of a charge.
- 222 **224 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.
- 223 **225 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 **226 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.
- 225 **227 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.
- 226 **228 EXTERIOR CAN BASECOAT:** 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 **229 EXTREME HIGH-GLOSS COATING:** A coating ~~when tested by the ASTM D 523 adopted in 1980~~ that shows reflectance of 75 or more on a 60° meter as determined by ASTM D523 (1980).
- 228 **230 ~~EXTREME PERFORMANCE~~ 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).
- 229 **231 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.
- 230 **232 FABRIC COATING:** 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.~~
- 232 **233 FILM COATING:** 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 **234 FINISH PRIMER/SURFACER:** A coating applied 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~~ D1212-85. ~~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.~~
- 234 **235 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 **236** **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 **237** **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 **238** **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 **239** **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 **240** **HEAT-RESISTANT COATING:** A coating that must withstand a temperature of at least 400°F (204°C) during normal use.
- 240 **241** **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 **242** **HIGH BUILD PRIMER/SURFACER:** A coating applied 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~~ high build primer/surfacer shall have a ~~wet film~~ wet film thickness of 10 mils or more as determined by ASTM Method D1212-85.
- 242 **243** **HIGH GLOSS COATING:** A coating that achieves at least 85 percent reflectance on a 60° meter when tested by ASTM ~~D-523-89~~ D523-89.
- 243 **244** **HIGH TEMPERATURE COATING:** A coating that is certified to withstand a temperature of 1000°F (537°C) for 24 hours.
- 244 **245** **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.
- 245 **246** **HIGHWAY VEHICLE:** A vehicle that is physically capable of being driven upon a highway including, but not limited to, cars, pickups, vans, trucks, truck-tractors, motor-homes, motorcycles, and utility vehicles.
- 246 **247** **INTERIOR BASECOAT:** 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.
- 247 **248** **INTERIOR BODY SPRAY:** 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 **249** **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.



- 249 **250** **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.
- 250 **251** **LOW PRESSURE SPRAY GUN:** An air-atomized spray gun, which by design, functions best at air cap pressures below 10 psig (0.7 bar), measured according to Section 503.1(d) of this rule, and for which the manufacturer makes no public claims that the gun can be used effectively above 12 psig (0.8 bar).
- 251 **252** **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.
- 252 **253** **METAL FURNITURE:** Furniture made of metal or any metal part which will be assembled with other parts made of metal or other material(s) to form a furniture piece.
- 253 **254** **METALLIC COATING:** A coating that contains more than 5 grams of metal particles per liter of coating as applied.
- 254 **255** **MILITARY SPECIFICATION COATING:** A coating that has a formulation that has been approved by a United States Military Agency for use on military equipment.
- 255 **256** **MOBILE EQUIPMENT:** Equipment that is physically capable of being driven or drawn on a highway including, but not limited to, construction vehicles (such as mobile cranes, bulldozers, concrete mixers); farming equipment (wheel tractor, plow, pesticide sprayer); hauling equipment (truck trailers, utility bodies, camper shells); and miscellaneous equipment (street cleaners, mopeds, golf carts).
- 256 **257** **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 **258** **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 **259** **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.
- 259 **260** **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 **261** **OPTICAL COATING:** A coating applied to an optical lens.
- 261 **262** **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.
- 262 **263** **OVERVARNISH:** 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 **264** **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.
- 264 **265** **PAPER COATING:** A coating applied on or impregnated into paper, including, but not limited to, adhesive tapes, book covers, post cards, office copier paper, and drafting paper.



- 265 **266** **PLASTIC:** Substrates 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 **267** **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 **268** **PLEASURE CRAFT COATING:** A marine coating that is applied to or intended by the manufacturer to be applied to pleasure craft.
- 268 **269** **PREFABRICATED ARCHITECTURAL COMPONENT COATING:** A coating applied to metal parts and products which are to be used as an architectural structure.
- 269 **270** **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 **271** **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 **272** **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.
- 272 **273** **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.
- 273 **274** **QUALITY CLASS Q:** A system, structure, coating or other component 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.
- 274 **275** **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.
- 275 **276** **REPAIR COATING:** A coating used to recoat the portion of a completed finish that suffered post-production damage at the facility where the finish was applied.
- 277** **SAFETY-INDICATING COATING:** A coating which changes physical characteristics, such as color, to indicate unsafe conditions.
- 278** **SHEET APPLIED RUBBER LINING ADHESIVE:** An adhesive or an adhesive primer that is used to bond sheets or strips of rubber to metal equipment so that such rubber sheathing directly contacts material received by the metal and so protects the metal.
- 276 **279** **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.
- 277 **280** **SILICONE RELEASE COATING:** 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.



- 278 **281** **SMALL SURFACE-COATING SOURCE (SSCS):** A facility from which the total VOC emissions for all surface coating operations that are subject to this rule without, or prior to, any emission control, is less than ~~2 tons/yr~~ tons per year (1814 kg); as demonstrated by both adequate records of coating and diluent use (according to Section 501.2 of this rule) and a separate tally of the number of days each month such coating operations occur.
- 279 **282** **SOLAR-ABSORBENT COATING:** A coating with the prime purpose of absorption of solar radiation.
- 283** **SOLID-FILM LUBRICANT:** A very thin coating consisting of a binder system containing as its chief pigment material one or more of molybdenum disulfide, graphite, polytetrafluoroethylene (PTFE) or other solids that act as a dry lubricant between faying surfaces.
- 280 **284** **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.
- 281 **285** **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.
- 282 **286** **SURFACE COATING:** A liquid, fluid, or mastic composition that is converted to a solid (or semi-solid) protective, decorative, or adherent film or deposit after application as a thin layer. Surface coating is generally distinct and different from impregnation and from applying adhesive for bonding purposes.
- 283 **287** **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 **288** **TEXTURE COATING:** A coating that is applied which, in its finished form, consists of discrete raised spots of the coating.
- 285 **289** **THREE-PIECE CAN SIDE-SEAM COATING:** A coating sprayed onto the interior and/or exterior of a can body seam on a three-piece can to protect the exposed metal.
- 286 **290** **TOPCOAT:** The final, permanent, coating formulation that completes the finish on a surface.
- 287 **291** **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 **292** **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.
- 289 **293** **TWO-PIECE CAN EXTERIOR END COATING:** A coating applied to the exterior end of a can to provide protection to the metal.
- 290 **294** **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 ~~substate~~ substrate to achieve a uniform metalized layer.
- 291 **295** **VINYL COATING:** A decorative or protective coating or reinforcing coating applied over vinyl-coated textile fabric or vinyl sheets.
- 292 **296** **VOC ACTUAL:** 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:

$$\text{VOC Actual} = \frac{W_s - W_w - W_{es}}{V_m}$$

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 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)

293 **297** **VOC CONTENT:** 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 sublimate from the liquid or solid form of the compound and enter the surrounding air. The term VOC content is a general term used throughout the rule and includes VOC, VOC Actual and VOC Regulatory.

294 **298** **VOC REGULATORY:** 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:

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

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:** An owner or operator shall comply with one of the following for all applications of surface coatings:

301.1 Meet the limits in Tables 336-1 through 336-7 of this rule. ~~Coating limits are calculated as VOC Regulatory (as applied).~~ Compliance will be determined ~~based on~~ by comparing VOC Regulatory



As Applied to the applicable 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 Section 305 of this rule when applying a coating that exceeds the VOC limits in Tables 336-1 through 336-7 of this rule. 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 Sections 103 or 104 of this rule.

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

Coating Category	Air Dried		Baked	
	g VOC/l	lb VOC/gal	g VOC/l	lb VOC/gal
Camouflage	420	3.5	420	3.5
Drum Coating, New, Exterior	340	2.8	340	2.8
Drum Coating, New, Interior	420	3.5	420	3.5
Drum Coating, Reconditioned, Exterior	420	3.5	420	3.5
Drum Coating, Reconditioned, Interior	500	4.2	500	4.2
Electric-Insulating Varnish	420	3.5	420	3.5
Etching Filler	420	3.5	420	3.5
Extreme High-Gloss	420	3.5	360	3.0
Extreme Performance	420	3.5	360	3.0
Heat-Resistant	420	3.5	360	3.0
High Performance Architectural	740	6.2	740	6.2
High Temperature	420	3.5	420	3.5
Metallic	420	3.5	420	3.5
Military Specification	340	2.8	280	2.3
Mold-Seal Coating	420	3.5	420	3.5
Multi-Component	340	2.8	280	2.3
One-Component	340	2.8	280	2.3
Pan Backing	420	3.5	420	3.5
Prefabricated Architectural Multi-Component	420	3.5	280	2.3
Prefabricated Architectural One-Component	420	3.5	280	2.3
Pretreatment Coating	420	3.5	420	3.5
Repair	420	3.5	360	3.0
Sheet Applied Rubber Lining Adhesive	850	7.1	850	7.1
Silicone Release	420	3.5	420	3.5
Solar-Absorbent	420	3.5	360	3.0
Touch-up	420	3.5	360	3.0
Vacuum Metalizing	420	3.5	420	3.5
Other Metal Parts and Products: Includes Non-Adhesive Coating, Adhesive Primer, Beaded Sealant, and Caulking	420	3.5	360	3.0
Strippable Booth Coating	240	2.0	–	–

Table 336-2: Coating Limits for Cans and Coils

Coating Category	g VOC/l	lb VOC/gal
Can Coating		
Can Printing Ink	300	2.5



Coating Category	g VOC/l	lb VOC/gal
End Sealing Compound	440 <u>20</u>	3.7 <u>0.2</u>
Sheet Basecoat (Exterior and Interior) and Overvarnish	340 <u>250</u>	2.8 <u>2.1</u>
Three-Piece Can Side-Seam Spray	660	5.5
Two and Three-Piece Can Interior Body Spray	510 <u>440</u>	4.2 <u>3.7</u>
Two-Piece Can Exterior (Basecoat and Overvarnish)	340 <u>250</u>	2.8 <u>2.1</u>
Two-Piece Can Exterior End (Spray or Roll Coat)	510 <u>250</u>	4.2 <u>2.1</u>
Coil Coating	310	2.6
Strippable Booth Coating (applies to both can and coil coating categories)	240	2.0

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

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

Table 336-4: Coating Limits for Business Machines

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

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

Coating Category	Air Dried		Baked	
	g VOC/l	lb VOC/gal	g VOC/l	lb VOC/gal
Extreme High Gloss	340	2.8	360	3.0
Extreme Performance	420	3.5	360	3.0
Heat-Resistant	420	3.5	360	3.0



Coating Category	Air Dried		Baked	
	g VOC/l	lb VOC/gal	g VOC/l	lb VOC/gal
Metallic	420	3.5	420	3.5
Pretreatment Coating	420	3.5	420	3.5
Refrigerated Glass Door Coating	480	4.0	–	–
Solar-Absorbent	420	3.5	360	3.0
<u>Other Coatings: Multi-Component</u>	340	2.8	275	2.3
<u>Other Coatings: One-Component</u>	275	2.3	275	2.3
Strippable Booth Coating	240	2.0	–	–

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

Coating Category	kg VOC/kg Coating (lb VOC/lb solids)	kg VOC/kg Solids (lb VOC/lb solids)	g VOC/l	lb VOC/gal
Fabric	–	–	350	2.9
Paper, Film, and Foil Surface Coating (Not Including Pressure Sensitive Tape and Label)	0.08	0.40	–	–
Pressure Sensitive Tape and Label Surface Coating	0.067	0.20	–	–
Vinyl	–	–	450	3.8
Strippable Booth Coating	–	–	240	2.0

Table 336-7: Coating Limits for Pleasure Craft

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

302 APPLICATION METHODS FOR SURFACE COATINGS:

302.1 An owner or operator shall use one of the following methods for all applications of surface coating materials containing more than 2 pounds of VOC per gallon (240 g/L), minus exempt compounds (VOC Regulatory As Applied):

- a. HVLP spray gun;
- b. Electrostatic system;
- c. A system that atomizes principally by hydraulic pressure, including “airless” and “air assisted airless”;
- d. Hand application methods, including but not limited to;



- (1) Flow Coat;
- (2) Roll Coat;
- (3) ~~Dip Coating~~ Dip Coating;

e. ~~An Alternative Application Method~~: Any method approved by the Administrator 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 As Applied).
- b. For applications of surface coating materials containing more than 2 pounds of VOC per gallon (240 g/L), minus exempt compounds (VOC Regulatory As Applied):
 - (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:** An owner or operator shall comply with the following when using VOC-containing material to clean application equipment:

303.1 ~~Spray Gun~~ **Spray Gun Cleaning Requirements:**

- a. Clean ~~spray guns~~ spray guns without spraying or atomizing a solvent cleaner with the gun.
- b. ~~Spray Gun~~ **Spray Gun Cleaning Machine:** Use a ~~spray gun~~ spray gun cleaning machine that complies with the following requirements unless the owner or operator complies with the manual ~~spray gun~~ spray gun cleaning requirements in Section 303.2 of this rule.
 - (1) ~~Spray Gun Cleaning Machine General Requirements~~ **General Requirements for Spray Gun Cleaning Machines:** The ~~spray gun~~ spray gun cleaning machine shall meet all of the following requirements:
 - (a) Be designed to clean ~~spray guns~~ spray guns.
 - (b) Have at least one pump that drives solvent cleaner through and over the ~~spray gun~~ 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~~ **Spray Gun Cleaning Machine:** An automatic ~~spray gun~~ 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 Cleaning Machine:** A non-automatic remote reservoir cleaning machine shall meet all of the following requirements:

(a) Drain solvent cleaner from the sink/work-space 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

(c) 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~~ Spray Gun Cleaning Requirements: An owner or operator manually cleaning ~~spray guns~~ spray guns shall comply with the following requirements:

a. Disassembled ~~spray guns~~ spray guns must be cleaned by non-mechanical, hand-held method of application of cleaners.

b. If disassembled ~~spray guns~~ spray guns are soaked 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 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 EMISSION CONTROL SYSTEM (ECS) REQUIREMENTS:

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.

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 used pursuant to this rule or to 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 used pursuant to this rule.
- c. The owner or operator shall comply with all identified actions and schedules provided in each O&M Plan.

305.3 Providing and Maintaining ECS Monitoring Devices: 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 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 Section 305.1 of this rule and is operated in accordance with the equipment manufacturer's specifications.

305.4 O&M Plan Responsibility: An owner or operator of a facility that is required to have an O&M Plan pursuant to 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.

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): An owner or operator installing an ECS shall:

- a. Implement all recordkeeping provisions, including Section 502 of this rule.
- b. Announce the intention to use an ECS to the Control Officer in writing if the ECS is used as an alternative to meeting the VOC limits of Section 301.1 of this rule.

~~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: 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.

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

- 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 content~~, 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.

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, 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:

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 Sections 503.2(f) of this rule (BAAQMD Method 31 [April 15, 1992]) or 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 Sections 503.2(c) (EPA Method 24), 503.2(f) (BAAQMD Method 31 [April 15, 1992]) or 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 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 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 Section 503.2(b) of this rule, or EPA Method 25 and its submethod, referred to in Section 503.2(d) of this rule.
- c. Capture efficiency of an ECS shall be determined either by the methods in 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 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 of an air-atomizing spray gun shall be performed using an attachable device in proper working order supplied by the gun's manufacturer for performing such a measurement.
- e. Temperature measurements shall be done with an instrument with an accuracy and precision of less than one-half degree Fahrenheit (0.25°C) for temperatures up to 480°F (250°C).

503.2 Compliance Determination-Test Methods Incorporated by Reference: The following test methods are approved for use for the purpose of determining compliance with this rule. The test methods are incorporated by reference in Appendix G of the Maricopa County Air Pollution Control Regulations. ~~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 controlled pursuant to Section 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 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).



Briefing Notification to County Manager

Prepared by the Maricopa County Air Quality Department

Case #/Title:

AQ-2017-007-Nitrogen Oxides (NO_x) Rules

(Rules 322, 323, and 324)

AQ-2017-008-Rule 336 (Surface Coating Operations)

AQ-2017-009-Organic Liquids (Non-Gasoline) And Gasoline Rules (Rules 350-353)

Supervisor Districts:

All Districts

Overview:

The purpose of these rulemakings is to revise the Maricopa County Air Quality Department's (MCAQD's) rules in order to secure their approval as part of the State Implementation Plan (SIP) under the federal Clean Air Act. These three rulemakings include the following eight rules:

AQ-2017-007-Nitrogen Oxides (NO_x) Rules

- Rule 322 (Power Plant Operations)
- Rule 323 (Fuel Burning Equipment From Industrial/Commercial/Institutional (ICI) Sources)
- Rule 324 (Stationary Reciprocating Internal Combustion Engines (RICE))

AQ-2017-008-Rule 336 (Surface Coating Operations)

- Rule 336 (Surface Coating Operations)

AQ-2017-009-Organic Liquids (Non-Gasoline) And Gasoline Rules

- Rule 350 (Storage And Transfer Of Organic Liquids (Non-Gasoline) At An Organic Liquid Distribution Facility)
- Rule 351 (Storage And Loading Of Gasoline At Bulk Gasoline Plants And Bulk Gasoline Terminals)
- Rule 352 (Gasoline Cargo Tank Testing And Use)
- Rule 353 (Storage And Loading Of Gasoline At Gasoline Dispensing Facilities)

On November 2, 2016, the Board of Supervisors adopted amendments to these rules to address the requirements of the SIP for "moderate" nonattainment for the 2008 eight-hour ozone national ambient air quality standard (NAAQS). On December 19, 2016, these rules were submitted to the U.S. Environmental Protection Agency (EPA) for approval and inclusion in the Arizona SIP. Based on the EPA's review of these rules, the EPA is conditionally approving these rules, pending amendments that clarify the rules and ensure that the rules meet the reasonably

available control technology (RACT) requirements. Permit fees are not changing due to these rulemakings.

Next Steps:

The rulemaking will follow the Enhanced Regulatory Outreach Program Policy and workflow process. Stakeholder workshops are tentatively scheduled to begin in early 2018.



Maricopa County

Air Quality Department

MEMORANDUM

Date: December 2017
To: Joy Rich, AICP, County Manager
Via: Reid Spaulding, Deputy County Manager
From: Philip A. McNeely, R.G., Director *PAM*
Subject: Amendments To Ozone Rules – County Manager's Approval

In accordance with the "Moratorium on Increased Regulatory Burdens" Resolution C-44-13-104-M-01 adopted by the Maricopa County Board of Supervisors on January 6, 2016, the Air Quality Department is seeking your approval to proceed with three (3) rulemakings. The rulemakings include eight (8) rules, which are proposed to be revised to address the requirements of the State Implementation Plan (SIP) for "moderate" nonattainment for the 2008 eight-hour ozone national ambient air quality standard (NAAQS).

On November 2, 2016, the Board of Supervisors adopted amendments to these rules to address the requirements of the SIP for "moderate" nonattainment for the 2008 eight-hour ozone NAAQS. On December 19, 2016, the rules were submitted to the U.S. Environmental Protection Agency (EPA) for approval and inclusion in the Arizona SIP. Based on the EPA's review of these rules, the EPA is conditionally approving these rules, pending amendments that clarify the rules and ensure that the rules meet the reasonably available control technology (RACT) requirements. Permit fees are not changing due to these rulemakings.

These rule revisions qualify for County Manager approval under the moratorium, as the rule revisions will comply with a federal statutory or regulatory requirement or state statutory requirement. We are requesting your approval to move the rule revisions forward in accordance with the "Moratorium on Increased Regulatory Burdens"; these rule revisions are to be referenced as "AQ-2017-007-Nitrogen Oxides (NO_x) Rules (Rules 322, 323, and 324)", "AQ-2017-008-Rule 336 (Surface Coating Operations)", and "AQ-2017-009-Organic Liquids (Non-Gasoline) And Gasoline Rules (Rules 350-353)".

A handwritten signature in black ink, appearing to be "JR", written over a horizontal line.

Approved by Joy Rich, AICP, County Manager