



Report to the Board of Health To Approve For Expedited Process

Prepared by the Maricopa County Air Quality Department

Case #/Title:	AQ-2015-006-Rule 342
Meeting Date:	April 25, 2016
Supervisor Districts:	All Districts
Applicant:	Staff
Request:	Approve for Expedited Process revisions to Rule 342 (Coating Wood Furniture and Fixtures)

Discussion:

Rule 342 limits the emission of volatile organic compounds (VOCs) from the surface preparation and coating of wood furniture and fixtures. Revisions to Rule 342 are being proposed 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). Rule 342 revisions will include Reasonably Available Control Technology (RACT) for VOCs.

Rule 342 is being revised to add or clarify text in order to meet the Control Techniques Guideline (CTG) for this rule – “Control Of Volatile Organic Compound Emissions From Wood Furniture Manufacturing Operations”, April 1996. The department is proposing to:

- Add VOC leak detection and repair requirements in Sections 300
- Add annual operator training requirements in Sections 400 and 500
- Add recordkeeping requirements for monthly VOC leak detection inspection and repair in Section 500

In addition, the department is proposing to:

- Move the exemptions from Section 307 to Section 103
- Delete “red” and “green” gun tagging requirements throughout Rule 342
- Add or revise definitions found in Section 200
- Revise Section 300 to include the redesign of the table in Section 301 for easier reading and the clarification of the use of spray guns and the handling and disposal of VOC containing materials

Support/Opposition:

Three Stakeholder Workshops were held: August 3, 2015, December 17, 2015, and February 9, 2016. Stakeholders included representatives from AF Lorts Company, AG Layne, American Coatings Association, Andrews Environmental Management, LLC, Copperstate Cabinet, Crown Custom Millwork, Geosyntec Consultants, Legends Furniture Company, Oak Canyon, Inc, Oakcraft, Inc, Ping, RPM Wood Finishes Group, Ryley Carlock and Applewhite Law Firm, SATA GmbH & Co. KG, The Sherwin-Williams Company, SWCA Environmental Consultants, Trendwood, Woodcase Fine Cabinetry, Inc, Wurth Louis, and the U.S. Environmental Protection Agency.

Workshop discussions included the applicability of RACT to the current rule, the economic impact a proposed reduction of VOC limits would have on the industry, the proposed addition of operator training and recordkeeping, the proposed addition of leak detection and recordkeeping, and alternative gun technologies now available.

For a detailed discussion of comments received during and after the Stakeholder Workshops, please refer to Section 5 in the attached Notice of Proposed Rulemaking.

Department Recommendation: Approve for Expedited Process

Per the Enhanced Regulatory Outreach Program Policy, Section IV(E), the Expedited Process may only be used if the following criteria have been met:

1. The proposed amendment has been subject to at least one Stakeholder Workshop (posted on the County's web site at least two weeks in advance) and one Citizens' Board or Commission meeting;
2. A draft of the regulatory change was available on the Enhanced Regulatory Outreach Program web site at least two weeks prior to the Citizens' Board or Commission meeting and was forwarded to the Board/Commission at least one week in advance of their review meeting;
3. No comments of opposition to the amendment have been received from the public;
4. The Citizens' Board or Commission reviewing the amendment recommends approval.

AQ-2015-006-Rule 342 has met the criteria for the Expedited Process:

1. Three Stakeholder Workshops were held: August 3, 2015, December 17, 2015, and February 9, 2016. Announcements of the workshops were posted on the County's web site at least two weeks in advance;
2. A draft of the regulatory change was available on the Enhanced Regulatory Outreach Program web site at least two weeks prior to the Board of Health meeting;
3. No comments of opposition to the amendment have been received from the public;
4. The department is requesting the Board of Health approve for Expedited Process.

Regulatory Process:

This regulatory change will follow the Enhanced Regulatory Outreach Program Policy and workflow process. The County Manager briefed the Board of Supervisors (BOS) regarding this rulemaking in May 2015.

Three Stakeholder Workshops were held: August 3, 2015, December 17, 2015, and February 9, 2016. Comments from the workshops have been incorporated into this rulemaking.

If the Board of Health approves this regulatory change for the Expedited Process, then this regulatory change will proceed with a 30-day public comment period through May 2016 and an anticipated Board of Supervisors' public hearing in late 2016. This regulatory change will take immediate effect upon approval by the Board of Supervisors.

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

Prepared By: Hether Krause

Attachments: [Preamble required by A.R.S. § 49-471.05](#) (See Notice of Proposed Rulemaking)

[Summary of the proposed regulatory change](#) (See Item 5 of the Notice of Proposed Rulemaking)

[Language of the proposed regulatory changes](#) (See Item 14 of the Notice of Proposed Rulemaking)

[Copies of all written and electronic Stakeholder input](#)

[County Manager Case Approval](#)

DRAFT – FOR PURPOSES OF BOARD OF HEALTH MEETING ON APRIL 25, 2016

NOTICE OF PROPOSED RULEMAKING

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MARICOPA COUNTY AIR POLLUTION CONTROL REGULATIONS

REGULATION III – CONTROL OF AIR CONTAMINANTS

RULE 342: COATING WOOD FURNITURE AND FIXTURES

PREAMBLE

- 1. Rule affected** **Rulemaking action**
Rule 342: Coating Wood Furniture And Fixtures 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. List of all previous notices appearing in the Register addressing the rulemaking:**
Notice Of Briefing To Maricopa County Manager: May 2015
Notice Of Stakeholder Workshops: August 3, 2015, December 17, 2015, February 9, 2016
- 4. Name and address of department personnel with whom persons may communicate regarding the rulemaking:**

Name: Hether Krause
Maricopa County Air Quality Department
Planning and Analysis Division
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5. Explanation of the rule, including the department's reasons for initiating the rulemaking:

Summary: Rule 342 (Coating Wood Furniture and Fixtures) limits the emission of volatile organic compounds (VOCs) from the surface preparation and coating of wood furniture and fixtures. Revisions to Rule 342 are being proposed 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). Rule 342 revisions will include Reasonably Available Control Technology (RACT) for VOCs.

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

- Add or clarify Rule 342 text in order to meet the Control Techniques Guideline (CTG) for this rule – “Control Of Volatile Organic Compound Emissions From Wood Furniture Manufacturing Operations”, April 1996
- Move exemptions from Section 307 to Section 103 in Rule 342
- Delete “red” and “green” gun tagging requirements throughout Rule 342
- Add or revise definitions found in Section 200

- Revise Section 300 to include the redesign of the table in Section 301 for easier reading and the clarification of the use of spray guns and the handling and disposal of VOC containing materials
- Add VOC leak detection and repair requirements in Sections 300 and 500 to meet CTG and RACT requirements
- Revise the compliance schedule in Section 400
- Add annual operator training requirements to Section 400
- Revise the finishing material list in Section 500
- Add recordkeeping requirements for monthly VOC leak detection inspection and repair and annual operator training in Section 500

In addition, the proposed amendments will correct typographical or other clerical errors; make minor grammatical changes to improve readability or clarity; modify the format, numbering, order, capitalization, punctuation, or syntax of certain text to increase standardization within and among rules; or make 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 14 of this notice.

Background:

The Clean Air Act Amendments (CAAA) of 1990 require ozone nonattainment areas to implement reasonably available control technology (RACT) to control volatile organic compound (VOC) emissions. This RACT determination for the associated industry is to be incorporated into the state implementation plan (SIP). RACT is defined by the United States Environmental Protection Agency (EPA) 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.” (44 FR53761, September 17, 1979) To assist state and local agencies in determining RACT, the EPA issues Control Techniques Guidelines (CTG) for specific sources. The CTG describes the “presumptive norm” for RACT and includes a review of current knowledge, technology and costs of a variety of emission control techniques. These guidelines provide state and local environmental agencies a guide in establishing reasonably available control technology (RACT) regulations for local wood furniture finishing operations. The state or local agency can then use the presumptive norm for RACT or develop more stringent measures to meet the established ozone standards.

In 1989, the EPA began the process of establishing the CTG presumptive norm for the wood furniture industry. Drafts of a CTG were presented in November 1991 to the National Air Pollution Control Techniques Advisory Committee (NAPCTAC) without a RACT determination for the wood furniture industry.

The wood furniture industry started to develop its own report in early 1991. This report evaluated a variety of emission control technologies for their technical feasibility and associated cost. The report also included

“an extensive analysis of the economic impacts of the control technologies...”¹ (page 1-3). The industry report did not include any RACT recommendations.

During this same time, the EPA began work on a national emission standard for hazardous air pollutants (NESHAP) for the wood furniture industry. The NESHAP establishes limits for hazardous air pollutants (HAPs). Because the CTG document was further along in the development than the NESHAP, industry was concerned they would be required to install control technologies to meet the CTG then later when the NESHAP was promulgated, have to invest again in different technologies. To address this issue, the EPA and industry agreed establish a committee and develop both the CTG and NESHAP through regulatory negotiation (58 FR 34011, June 23, 1993). In November 1994, the committee reached consensus on the CTG and NESHAP framework and principles. The EPA issued the CTG for the wood finishing industry on May 20, 1996 (60 FR 25223).

The department began the rulemaking process for new Rule 342 (Coating Wood Furniture and Fixtures) during the same time period as the EPA was developing the CTG. Rule 342 was proposed to apply “...to any facility applying finishing material to furniture or fixtures made of wood or wood-derived material.”² The rulemaking included VOC limits for the maximum concentration of VOC for various sealers and topcoats; emission control system (ECS) requirements; requirements for the use of various types of spray guns; and compliance options for small sources. On February 15, 1995, the department submitted Rule 342 to the Maricopa County Board of Supervisors (Board) for adoption. Stakeholders raised objection to the proposed rule because the option of meeting VOC limits through the use of averaging had been omitted from the proposed rule. The EPA was still in the process of drafting the CTG so no final determination had been made at the federal level concerning the averaging provision of the CTG. The department stated that the averaging provisions had been withdrawn from the draft rule because the department could not, at that time, demonstrate that the averaging provisions would meet the proposed VOC limits. The Board voted to continue Rule 342 to allow the department and Stakeholders to reach an agreement on the inclusion of the averaging provisions.³

The department and Stakeholders worked together to revise the draft Rule 342. On April 3, 1996, the Board again conducted a public hearing on the revised draft Rule 342. There were no objections to the proposed rule and the Board unanimously approved Rule 342, effective April 3, 1996.⁴

Additional alternative provisions were proposed to Rule 342. These included the proposed additions of separate appendices for: small emitters of VOC; and ECS requirements. Additional proposed revisions included an optional allowance of up to 5% of total coating to be applied by a conventional spray gun; recordkeeping formatting; clarification and addition of definitions; and use of colored tags on guns spraying higher VOC coating material.⁵ The Board unanimously approved the additional proposed revisions for Rule 342 on November 20, 1996.⁶

Rule 342 remained unchanged until 2013 when the department opened the rule for a “limited scope” rulemaking. This limited scope revision provided the means for the department to streamline the approval

of updates to the EPA definition of VOC to a consistent definition of VOC and “non-precursor organic compounds.” In addition, the 2013 rule revision allows businesses to use a wider range of materials, thus leveling the playing field for companies within Maricopa County with those operating in other jurisdictions.⁷

As of October 2015, there were eight-two (82) permits issued by Maricopa County Air Quality that include Rule 342 requirements⁸. Three permits are Title V sources, but not necessarily Title V for VOC emissions from wood finishing only. Fifteen (15) permits are general woodworking permits. The remainder of the facilities have a Non-Title V permit. Some of these Non-Title V permitted facilities may be “synthetic minors” meaning the facility has accepted an emission limit below the Title V threshold. The Non-Title V permittees may or may not be permitted with the primary process being wood finishing.

Issues Raised and Discussed During This Rulemaking Process:

The department held three Stakeholder workshops: August 3, 2015, December 17, 2015, and February 9, 2016. Stakeholders included representatives from AF Lorts Company, AG Layne, American Coatings Association, Andrews Environmental Management, LLC, Copperstate Cabinet, Crown Custom Millwork, Geosyntec Consultants, Legends Furniture Company, Oak Canyon Manufacturing, Inc, Oakcraft, Inc, Ping, RPM Wood Finishes Group, Ryley Carlock and Applewhite Law Firm, SATA GmbH & Co. KG, The Sherwin-Williams Company, SWCA Environmental Consultants, Trendwood, Woodcase Fine Cabinetry, Inc, Wurth Louis, and the EPA.

Workshop discussions included the applicability of RACT to the current rule, the economic impact a proposed reduction of VOC limits would have on the industry, the proposed addition of operator training and recordkeeping, the proposed addition of leak detection and recordkeeping, and alternative gun technologies now available.

RACT Issues Raised and Discussed

VOC EMISSION LIMITS

The department originally proposed to reduce the VOC emission limits for all coating types. Stakeholders said that the proposed reduction in the VOC limits goes beyond the established RACT requirements. The American Coatings Association responded:

The current [original department proposed VOC limit] 275 g/l VOC industrial wood coating formulation technology that was developed for use in southern California for industrial customers could not be applied in the even hotter and dryer climate in Arizona. The majority of manufacturers and shops do not have air conditioning or operate in temperature and humidity controlled environments. Solventborne 275 g/l coatings rely on acetone that volatilize too quickly in the hot and dry environment of AZ and therefore does not spray well and produces an aesthetically unacceptable finish. Reformulating with other exempt compounds will increase the cost of the coatings, since these cost more than acetone. In addition, waterborne coatings that meet the 275 g/l limits have similar aesthetic issues.

Also due to the Maricopa County's hot desert climate, we suggest that there are application difficulties with the [department proposed] 120 g/L (material) VOC Low-Solids Stain and Low-

Solids Toner and Washcoat. Traditional High Solids Stain at <350 g/L VOC has not emerged as an acceptable alternative in other jurisdictions because the time required for curing before application of sealer and/or topcoat is generally considered excessive.⁹

Stakeholders requested that the department conduct more research to determine the VOC limits that would meet current RACT. The Stakeholders also requested documentation of the emissions inventory for the wood finishing industry in Maricopa County and how much emission reduction is hoped to be achieved with the proposed VOC limits. The original proposed VOC limits were from air agencies that are areas designated as serious nonattainment for ozone. The department reviewed other rules of air agencies that are in moderate ozone nonattainment areas. The department determined the proposed VOC emission limits were too stringent for a moderate nonattainment area. The proposed Table 342-2 retains the current VOC emission limits and clarifies the VOC emission limits for specific types of coatings. Other suggested table revisions included the addition of strippable booth coating, and low VOC topcoat VOC limits.

VOC LEAK DETECTION AND REPAIR

Section 304 and Section 501.4 are proposed to be added for VOC Leak Detection and Repair standards. The department referred to the CTG to determine the requirements for leak detection and repair. CTG Section 5.3.1.2 VOC Transfer^(pg 5-7) describes the leak inspection program. The minimum criteria identified in the CTG included a monthly inspection frequency; procedures for addressing leaking equipment; and a maximum time frame for completing repairs unless replacement equipment has been ordered. The department worked with the Stakeholders in drafting Section 304 of the proposed rule to include leak inspections for “equipment used to transfer or apply VOC containing finishing materials.” In addition, monthly leak inspection is required. Leak repair specifies the first attempt to repair is to be made within five days of detection with final repairs completed within fifteen days. Additional items were added in the proposed final repair section. Options to meet the final repair time frame also include the option of removing the leaking equipment from service and an option of replacing the leaking equipment with a new purchase within three months of leak detection. Proposed Section 501.4 identifies the information that is required to document VOC leak detection and any required repairs. Stakeholders requested that the rule list out the specific information that is required for the inspection records. This proposed list will make it clear for the owner or operator as well as for inspection purposes.

EMPLOYEE TRAINING REQUIREMENTS

Proposed Section 403 (Annual Operator Training Requirements to Reduce VOC Emissions) includes training requirements for employees. CTG Section 5.3.3 General Work Practice Requirements^(pg 5-14) outlines the minimum requirements for a training program. The CTG recommends annual training that includes coating application, cleaning and washoff techniques, proper equipment operation, methods to reduce solvent usage, and proper management of VOC waste materials. Stakeholders requested this section be clearly identified to be applicable to VOC containing materials only. Stakeholders were concerned facility operations that did not involve VOC containing materials may be noted as being in non-compliance during an inspection. The department revised the proposed section title to be specific to VOC emissions. In addition, the department is proposing to include specific training as recommended in the CTG. The department is proposing to allow up to six months after proposed rule adoption for facilities to come into

compliance with the proposed rule revisions. The department is proposing to add Section 501.5 (Annual Operator Training Records Required by Section 403 of this Rule) to list out the specific requirements for the training recordkeeping. This proposed list will make it clear for the owner or operator as well as for inspection purposes.

Section 100 Issues Raised and Discussed

Section 100, Table 342-1 (Applicable Standard Industrial Classification (SIC) Codes) is proposed to be added as a convenience to the reader. Stakeholders and department staff agreed that the addition of the table with the SIC title will make it easier to identify the type of woodworking to which the rule applies. Since the definition of WOOD FURNITURE AND FIXTURES in Section 236 of the rule lists the SIC numbers to identify what constitutes wood furniture and fixtures and therefore to what Rule 342 applies, the department is proposing to include such SIC in the Applicability section of the rule. Although SIC have been updated to North American Industry Classification System (NAICS), the department did not include NAICS in the proposed draft of Rule 342. The proposed draft of Rule 342 is intended to be updated to match the CTG; the CTG uses SIC as the means by which to determine applicability; therefore, the department did not propose to include NAICS in the proposed draft of Rule 342.

The department proposes to add Section 103 (Exemptions) and delete Section 307 from the current rule. The exemptions described in current Rule 342, Section 307 are difficult to find. Stakeholders and department staff agreed that moving the exemptions to the beginning of the rule will make it easier to identify rule applicability to a facility. In addition, Stakeholders requested that the exemptions section be made more clear by including an exemption from other Maricopa County Air Pollution Control Regulations to which sources that are subject to Rule 342 are exempt. The department is proposing to add Section 103.1(c) to address this concern.

Section 200 Issues Raised and Discussed

The current definition of CERTIFIED PRODUCT DATA SHEET (CPDS) includes a requirement that "...an officer of a coating supplying operation..." sign the CPDS. Stakeholders stated that the suppliers do not sign the CPDS that accompany the VOC containing materials; this creates a situation where the facility cannot comply with the rule as currently written. The CPDS definition was taken from the definitions in the CTG Model Rule language. In the years since the CTG was issued, manufacturers and suppliers have included the VOC content information on labels and on product information supplied to the facilities. The American Coatings Association supported the suggestion to remove the signature requirement for the CPDS. Further discussion addressed if the definition was even needed in the rule. Since Appendix A To Rule 342 references the CPDS, the Stakeholders and the department agreed to propose to delete the definition from Section 200 and to add the definition of "CPDS" to Appendix A To Rule 342.

The definition of a HIGH-VOLUME, LOW PRESSURE SPRAY GUN (HVLP) is proposed to be added. At the time the CTG was written, the "disadvantage of HVLP systems in general is that the HVLP systems are reportedly not always able to apply finishes as quickly as the other spray techniques."¹ (pg. 2-25) Since the

HVLP spray gun operated at a 10 psi, a psi at or below a low pressure spray gun, it is assumed that by defining LOW PRESSURE SPRAY GUN, an HVLP gun would be included in the definition. Since the issuance of the CTG, manufacturers have continued to refine the HVLP spray gun. It is now the most common type of spray gun in use and considered the industry standard in which to measure spray gun efficiency against. The inclusion of the definition of HVLP spray gun will provide language consistent with current industry and manufacturing terms. In addition to adding the definition of HVLP, Stakeholders requested referencing HVLP spray guns whenever low pressure spray guns are specified. The department is proposing to add the definition of HVLP spray gun, retain the definition of LOW PRESSURE SPRAY GUN, and include references to HVLP spray guns where appropriate in the proposed rule.

Stakeholders requested that the definition of WORKING DAY be revised to limit the definition to when VOC containing material is used. Stakeholders stated that there are times when “manufacturing” is taking place, but no VOC containing materials are being used. Examples of these types of “manufacturing” operations include the prep work, such as cutting and sanding, of wood materials. Revising the definition to include just the operations involving VOC containing material would follow the rule’s purpose and applicability as stated in Section 100 of the rule. Since the rule does not cover the emissions of particulate matter and does limit the emissions to VOC emissions, the department proposes to limit the definition of WORKING DAY to a day or days when “...the application of VOC containing finishing material [is applied] to wood furniture or fixtures.”

Section 300 Issues Raised and Discussed

The department originally proposed to reduce the VOC emission limits for all coating types. After further review (refer to “RACT Issues Raised and Discussed” section above) the proposed Table 342-2 retains the current VOC emission limits and clarifies the VOC emission limits for specific types of coatings. Other suggested table revisions include the addition of strippable booth coating and low VOC topcoat VOC limits.

Section 304 is proposed to be added for VOC Leak Detection and Repair standards. Refer to “RACT Issues Raised and Discussed” section above for a detailed discussion.

Section 305 is proposed to be renumbered to Section 306 and to specify that the section is applicable to the handling and disposal of VOC containing materials. Stakeholders expressed concerns that non-VOC containing materials may be noted as being in non-compliance during an inspection. There was concern that Section 305.1 (Use and Storage) was unclear as to when a material is considered “in use”. The department considered this issue and is proposing to revise the provision in Rule 342, Section 306 to specify that storage containers for VOC containing materials must be covered when not in use.

Section 306 is proposed to be deleted in its entirety. The section includes requirements for manufacturers of wood furniture coatings and not to stationary sources. The department has authority (under Arizona Revised Statutes) to regulate stationary sources of air pollution, not manufacturers of coatings.

Section 307 is proposed to be deleted in its entirety. The exemptions are proposed to be included in new Section 103 of the proposed Rule 342. The exemptions as located in current Rule 342, Section 307, are difficult to find.

Section 400 Issues Raised and Discussed

Section 401.2 is revised to delete the past compliance dates. The requirement stated in Section 401.2(b) is now incorporated into the main paragraph in Section 401.2. Section 401.2(a) is proposed to be deleted since the compliance date has passed.

Section 403 (Gun Tagging Requirements) is proposed to be deleted. Gun tagging requirements are no longer needed.

Proposed Section 403 (Annual Operator Training Requirements to Reduce VOC Emissions) includes training requirements for employees. Section 5.3.3 General Work Practice Requirements of the CTG¹ (pg 5-14)¹⁴ outlines the minimum requirements for a training program. Refer to “RACT Issues Raised and Discussed” section above for a detailed discussion. The department is proposing to include specific training as recommended in the CTG and to allow up to six months after proposed rule adoption for facilities to come into compliance with the proposed rule revisions.

Section 500 Issues Raised and Discussed

Section 501.1 is proposed to be revised to specify that a current list of all VOC containing material be updated by the end of the following month. Section 501.1(b) (How to Express VOC Content) and Section 501.1(c) (Acceptable Format) are proposed to be deleted. Section 501.1(d) (Mix Ratios) is proposed to be retained, re-numbered, and clarified; a current list of VOC containing mix ratios for catalyst/hardeners shall be maintained if the manufacturer's recommended mix ratio is not followed or when the manufacturer has no recommendations.

Proposed Section 501.4 (Monthly VOC Leak Detection Inspection and Repair Records) identifies the information that is required to document VOC leak detection and any required repairs. Stakeholders requested that the rule list out the specific information that is required for the inspection records. This proposed list will make it clear for the owner or operator as well as for inspection purposes. Refer to “RACT Issues Raised and Discussed” section above for a detailed discussion.

The department is proposing to add Section 501.5 (Annual Operator Training Records Required by Section 403 of this Rule) to list out the specific requirements for the training recordkeeping. This proposed list will make it clear for the owner or operator as well as for inspection purposes.

Appendix A(d)(1) definitions are proposed to be revised to include the definition of CERTIFIED PRODUCT DATA SHEET. Stakeholder discussion asked if the definition was even needed in the rule. Appendix A To Rule 342 does reference the certified product data sheet. The Stakeholders and department

agreed to propose to delete the definition from Section 200 and add CERTIFIED PRODUCT DATA SHEET to the definitions in Appendix A To Rule 342.

The department is proposing to add Table 342-3 (Formula 2 Neutral Point VOC Content of Coating) in Appendix A(d)(6). The department felt a table would be easier to read and determine the neutral point for the various coatings; the department is not proposing to change the limits.

The Green Tag requirements in Appendix B(d)(2) are proposed to be deleted for consistency throughout the rule. The heading for Appendix B(e)(1) (Housekeeping Functions) is proposed to be changed. Stakeholders requested that “Keep Coatings” be changed to “VOC Containing Material”, so the header will read “VOC Containing Material, Cleaners, & Waste-Materials Covered”.

Description of Proposed Amendments:

Propose to revise the following throughout the rule:

- To renumber the sections to reflect additions or deletions
- To change “subsection” to “section.”
- To delete “no person” and insert “an owner or operator”
- To add references throughout the rule to HVLP spray guns where ever requirements for low-pressure spray guns are cited
- To delete the duplicate Section 307.2(e) and Errata Note 1
- To add the title of test methods
- To delete the past compliance dates
- To include English measurements followed by metric measurements in parenthesis
- To delete references to “red” and “green” tags for spray guns

Propose the following in Section 100:

- To add Table 342-1 (Applicable Standard Industrial Classification Codes)
- To add Section 103 (Exemptions)

Propose the following in Section 200:

- To delete the definition of CERTIFIED PRODUCT DATA SHEET
- To add the definition of HIGH-VOLUME, LOW PRESSURE SPRAY GUN (HVLP)
- To revise the definition of KILOGRAMS VOC PER KILOGRAM OF COATING SOLIDS
- To revise the definition of VOC SOLVENT to VOC CONTAINING SOLVENT
- To revise the definition of WORKING DAY

Propose the following in Section 300:

- To revise the table in Section 301.1
- To revise the wording in Section 301.1 and delete 301.1(a) and (b)
- To delete section 301.1(c)
- To revise the wording in Section 302.1
- To revise the wording in Section 302.2; proposed text in Section 302.2(c)(2) is from CTG, Appendix B(5)(g)(ii)

- To add Section 304 (VOC Leak Detection and Repair)
- To revise the wording in Section 305
- To delete Section 307

Propose the following in Section 400:

- To delete past compliance dates in Section 401
- To revise the wording in Section 401.2
- To delete Section 403 (Gun Tagging Requirements)
- To add Section 403 (Annual Operator Training Requirements to Reduce VOC Emissions)

Propose the following in Section 500:

- To revise Section 501.1(b) (List Maximum VOC Content of Finishing Material as Applied)
- To delete Section 501.1(b) (How to Express VOC Content)
- To delete Section 501.1(c) (Acceptable Format)
- To delete Section 501.1(d) (Mix Ratio)
- To add Section 501.4 (Monthly VOC Leak Detection Inspection and Repair Records)
- To add Section 501.5 (Annual Operator Training Records Required by Section 403 of this Rule)
- To revise Section 502 (Compliance Determination-Test Methods)

Propose the following in Appendix A:

- To add CERTIFIED PRODUCT DATA SHEET to Appendix A(d)(1)
- To add Table 342-3 (Formula 2 Neutral Point VOC Content of Coating) in Section d(6)

Propose the following in Appendix B:

- To change the heading of Section B(e)(1) (Housekeeping Functions)
- To revise the title of Section d(2) (Conventional Spray Gun Restriction)
- To delete Section d(2)(a) (Green Tag Requirements)

References:

1. “Control Of Volatile Organic Compound Emissions From Wood Furniture Manufacturing Operations”, EPA-453/R-96-007, April 1996.
2. Arizona Administrative Register, 1 A.A.R. 100, February 17, 1995.
3. Maricopa County Clerk of the Board Certified Minutes, February 15, 1995.
4. Maricopa County Clerk of the Board Certified Minutes, April 03, 1996.
5. Arizona Administrative Register, 2 A.A.R. 4305, October 18, 1996.
6. Maricopa County Clerk of the Board Certified Minutes, November 20, 1996.
7. Arizona Administrative Register, 19 A.A.R. 3611, November 22, 2013.
8. Department email between Cheri Dale, Doug Kober and Philip McNeely, October 27, 2015.
9. Department email from David Darling, American Coatings Association, September 01, 2015.

6. 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(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. While currently classified as a “marginal” ozone nonattainment area, the county recently failed to meet 2008 8-hour ozone standard by the marginal area attainment date and anticipates EPA will issue a notice proposing to re-classify the area to “moderate”. 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. Currently, a portion of Maricopa County and Apache Junction in Pinal County is designated serious nonattainment for the PM₁₀ 24-hour standard. This is the only serious PM₁₀ nonattainment area in Arizona. Revisions to Rule 342 are being proposed 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). The proposed amendments in Rule 342 include Reasonably Available Control Technology (RACT).

The department complies with A.R.S. § 49-112(B) in that the proposed amendments to Rule 342 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.

7. Reference to any study relevant to the rule that the department reviewed and either proposes to rely on in its evaluation of or justification for the rule, where the public may obtain or review each study, all data underlying each study, and any analysis of each study and other supporting material:

Not applicable

8. 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

9. Preliminary summary of the economic, small business, and consumer impact:

A detailed preliminary summary of the economic, small business, and consumer impact will appear in the Notice of Proposed Rulemaking that is anticipated to be published in the Arizona Administrative Register on May 6, 2016.

There are about 70 sources in Maricopa County subject to this rule.

Permit fees are not changing due to this rulemaking.

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

Name: Hether Krause
Maricopa County Air Quality Department
Planning and Analysis Division
Address: 1001 N Central Avenue, Suite 125
Phoenix, AZ 85004
Telephone: (602) 506-6010
Fax: (602) 506-6179
E-mail: aqplanning@mail.maricopa.gov

11. Time, place, and nature of the proceedings for the rulemaking:

Written oral proceeding requests or written comments or both will be accepted until the record is closed on June 6, 2016, 5:00 p.m. Written oral proceeding requests or written comments or both may be mailed, e-mailed, or hand delivered to the department (see Item #4 of this notice). An oral proceeding will be scheduled only upon receipt of a written request before the record is closed on June 6, 2016, 5:00 p.m. Written comments received during the comment period and before the record is closed on June 6, 2016, 5:00 p.m. will be considered formal comments to the Notice of Proposed Rulemaking and will be responded to in the Notice of Final Rulemaking.

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

Not applicable

13. Incorporations by reference and their location in the rule:

Incorporations by reference are in Section 502 (Compliance Determination-Test Methods)

14. Full text of the rule follows:

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

RULE 342
COATING WOOD FURNITURE AND FIXTURES

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Adopted 04/03/1996; Revised 11/20/1996; Revised 09/25/2013; and **Revised MM/DD/YYYY**

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

**RULE 342
COATING WOOD FURNITURE AND FIXTURES**

SECTION 100 – GENERAL

- 101 PURPOSE:** To limit emissions of volatile organic compounds from the surface preparation and coating of wood furniture and fixtures.
- 102 APPLICABILITY:** The provisions of this rule apply to any facility in Maricopa County applying finishing material to furniture or fixtures made of wood or wood derived material. Simplified provisions of Appendix B in this rule may be used by facilities which agree to a permit limit of less than 10 tons of VOC emissions per year. For sources emitting less than 2 tons of VOC per year, ~~consult subsection 307.24~~ refer to Section 103.2(d) of this rule. This rule does not apply to the coating of any millwork included under SIC code #2431.

Table 342-1: APPLICABLE STANDARD INDUSTRIAL CLASSIFICATION (SIC) CODES*

<u>Standard Industrial Classification (SIC) code</u>	<u>SIC Title</u>
<u>2434</u>	<u>Wood Kitchen Cabinets</u>
<u>2511</u>	<u>Wood Household Furniture, Except Upholstered</u>
<u>2512</u>	<u>Wood Household Furniture, Upholstered</u>
<u>2517</u>	<u>Wood Television, Radio, Phonograph, and Sewing Machine Cabinets</u>
<u>2519</u>	<u>Household Furniture, Not Elsewhere Classified</u>
<u>2521</u>	<u>Wood Office Furniture</u>
<u>2531</u>	<u>Public Building And Related Furniture</u>
<u>2541</u>	<u>Wood Office and Store Fixtures, Partitions, Shelving, and Lockers</u>
<u>2599</u>	<u>Furniture and Fixtures, Not Elsewhere Classified</u>
<u>2515</u>	<u>Mattresses, Foundations, and Convertible Beds</u>

*Per the United States Department of Labor Occupational Safety and Health Administration. Web access at <https://osha.gov/index.html>

103 EXEMPTIONS:

103.1 Total Exemptions:

- a.** This rule does not apply to the coating of any millwork included under SIC code 2431 Millwork.
- b.** The following materials are exempt from this rule:
- (1)** Adhesives.
 - (2)** Architectural coatings.
 - (3)** Printing ink.
 - (4)** Coatings that are not applied on or over a wood product substrate.

- c. Sources subject to Rule 342 are exempt from the following Maricopa County Air Pollution Control Regulations:
 - (1) Rule 330 (Volatile Organic Compounds)
 - (2) Rule 336 (Surface Coating Operations)

103.2 Partial Exemptions:

- a. **Aerosol Spray Can Coating:** Coatings in aerosol spray cans not exceeding 22 fl. oz. (0.66 liter) capacity and used exclusively for touch-up and/or repairs are subject to only the reporting requirements in Section 500 of this rule.
- b. The following are exempt from the VOC limits in Section 301.1 of this rule, but shall comply with all other provisions of this rule:
 - (1) The annual total use of all of the following coating types is less than 250 gallons (948 liters):
 - (a) Prepackaged aerosol spray cans which are not used for touch-up or repair;
 - (b) Metal leaf finishes; and
 - (c) Faux finishes.
 - (2) **Refinishing, Replacement, and Custom Replica Furniture Operations:**
 - (a) Any refinishing operation necessary for preservation;
 - (b) To return the furniture or fixture to original condition;
 - (c) To replace missing furniture to produce a matching set; or
 - (d) To produce custom replica furniture.
 - (3) Stains, washcoats, glazes, toners, inks, and other coatings not specified in Section 301.1 of this rule.
- c. The coating for a single resin-layer finish which does not exceed a VOC limit of 3 lb VOC/lb solids for completed finishes up to 3 dry mils thickness or does not exceed 2.3 lb VOC/lb solids for finishes over 3 dry mils is exempt from the VOC-limits of Section 301.1 of this rule if all of the following conditions are met:
 - (1) The containers are clearly marked "FOR USE IN SINGLE RESIN LAYER FINISH";
 - (2) Facility records clearly identify this material: "DOES NOT MEET THE VOC LIMITS OF SECTION 301, RULE 342. FOR USE ONLY IN SINGLE RESIN-LAYER FINISHES"; and
 - (3) The booth used to apply a single resin-layer finish above 2.3 lb VOC/lb solids is dedicated to that operation only, and is clearly labeled "FOR SINGLE RESIN-LAYER FINISHES ONLY".
- d. **Small Source Status:** A furniture coating facility which at any time demonstrates that it currently meets all the requirements in Sections 103.2(d)(1) of this rule is exempt from all provisions of this rule except for the sections listed in Section 103.2(d)(2) of this rule.
 - (1) **Small Source Status Requirements:**
 - (a) Facility records demonstrate that no more than a total of 55 gallons (209 liters) of VOC containing wood-product coatings and VOC containing solvent are used in any consecutive 12-month period; and
 - (b) The monthly total usage of VOC containing wood-product coatings and VOC containing solvent divided by that month's number of working days of coating application does not exceed 3.0 gallons (11.4 liters) per working day.
 - (c) The facility emits less than 4000 pounds (1814 kg) VOC, facility-wide per year from all wood-product coating operations, all VOC containing diluent added to coatings, all VOC containing solvent cleaning and stripping, and VOC containing solvent used for coating equipment cleanup.

- (2) Small Sources shall comply with all of the following sections of Rule 342:
- (a) Section 303: OPERATION AND MAINTENANCE;
 - (b) Section 304: LEAK DETECTION AND REPAIR;
 - (c) Section 306: HANDLING AND DISPOSAL OF VOC CONTAINING MATERIAL;
 - (d) Section 400: ADMINISTRATIVE REQUIREMENTS; and
 - (e) Section 500: MONITORING AND RECORDS.
- e. Using Conventional and other Restricted Use Guns:** In addition to the uses of restricted-use guns allowed under Sections 103.2(a), (b), and (c) of this rule, an owner or operator may use a conventional air-atomized or other restricted use gun to apply coatings exceeding 1 lb VOC/lb solids if both the following conditions are met:
- (1) The volume of such coating applied in this way is less than 5% of the total semi-annual volume of coating applied at the facility; and
 - (2) A log is kept pursuant to Section 501.2(c) of this rule of the amount of coating used by each such gun. This shall be done daily or each time coating is added to the gun's coating reservoir; and semi-annual calculation shall be made pursuant to Section 501.2 of this rule.

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:** Any substance, usually having a fluid phase during application, used principally to bond two or more surfaces into close proximity with one another.
- 202 AEROSOL SPRAY COATING:** A coating which is sold in a hand-held, pressurized, non-refillable container, usually of less than 22 fluid ounces (0.66 liter) capacity, and which is expelled from the container in a finely divided form when a valve on the container is depressed.
- 203 AIR-ATOMIZED SPRAY (GUN):** Equipment used to apply coatings in which the chief means of atomizing the coating is via pressurized air which also mixes into the cloud of coating particles after expulsion from a spray nozzle.
- 204 ARCHITECTURAL COATING:** Any coating applied to stationary structures and their appurtenances, to mobile homes, to pavements or to curbs.
- 205 BASECOAT:** A coat of colored material, usually opaque, that is applied before graining inks, glazing coats, or other high-hiding finishing materials. A basecoated surface usually receives a topcoat also.
- ~~206~~ **CERTIFIED PRODUCT DATA SHEET:** ~~A document, signed by an officer of a coating supplying operation, stating precisely the maximum VOC content of a particular coating as supplied.~~
- ~~207~~**206 COATING:** Any liquid, fluid, or mastic composition which is converted to a solid (or semi-solid) protective, decorative, or adherent film or deposit after application to a substrate as a thin layer.
- ~~208~~**207 CONVENTIONAL AIR-ATOMIZED SPRAY:** Any spray coating method in which the coating is atomized principally by mixing it with compressed air at an air pressure greater than 10 pounds per square inch (gauge) at the point of atomization, and which is not used with an electrostatic transfer system. Airless and air-assisted airless spray technologies are not conventional air-atomized spray because the principal means of atomizing the coating is via hydraulic pressure and not by mixing the coating with compressed air.

- ~~209~~**208** **CUSTOM REPLICA FURNITURE:** Furniture individually produced or repaired after an order has been received from a client specifying a particular style and period, using both the style and the methods of construction, including materials, joinery, and finishes, which are authentic to the period.
- ~~210~~**209** **DAY:** A period of 24 consecutive hours beginning at midnight.
- ~~211~~**210** **DILUENT:** For the purpose of this rule, any fluid in or added to a coating such as thinner, retarder, reducer, solvent, or drying accelerator which solubilizes, adjusts concentration, viscosity, flow, or drying rates and which evaporates as the coating film solidifies and cures.
- ~~212~~**211** **ELECTROSTATIC APPLICATION:** A method of applying coating by electrically charging coating droplets or particles causing their deposition onto a substrate by electrostatic attraction.
- ~~213~~**212** **EMISSION CONTROL SYSTEM (ECS):** A system for reducing emissions of organic compounds, consisting of both collection and control devices which are approved in writing by the Control Officer and are designed and operated in accordance with good engineering practice.
- ~~214~~**213** **FACILITY:** For the purpose of this rule, all the pollutant-emitting activities located on one or more contiguous or adjacent properties, under the control of the same person or persons under common control, and described by one or more of the industrial groupings listed in Section 238 of this rule.
- ~~215~~**214** **FAUX FINISH:** A finish intended to simulate a surface other than wood, including, but not limited to, stone, sand, metal, fur and leather.
- ~~216~~**215** **FINISHING MATERIAL:** A coating other than one designed solely or principally as an adhesive, temporary maskant, and/or preservative. For wood furniture and fixtures, finishing materials include, but are not limited to, topcoats, sealers, primers, stains, basecoats, washcoats, enamels, toners, glazes, and graining inks.
- ~~217~~**216** **HIGH SOLIDS STAINS:** Stains which are formulated to enhance wood grain and change wood color, but not conceal surface grain. For the purpose of this rule, high solids stains are stains that contain at least 120 grams of solids per liter (1 lb/gal) of stain as applied, and can include wiping stains and glazes.
- 217** **HIGH-VOLUME, LOW PRESSURE SPRAY GUN (HVLP):** 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.
- 218** **KILOGRAMS VOC PER KILOGRAM OF COATING SOLIDS:** A measurement that is used in this rule to express the VOC content of a coating. For any coating, kilograms VOC per kilogram coating solids is numerically identical to both pounds of VOC per pound of coating solids and to grams VOC per gram of coating solids. ~~Abbreviations used include kg VOC/kg solids (lb VOC/lb solids) or simply kg/kg (lb/lb).~~
- 219** **LOW PRESSURE SPRAY GUN:** An air-atomized spray gun which by design functions best at ~~tip air cap~~ pressures below 10 psig (0.7 bar) measured according to ~~subsection~~ Section 502.2 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).
- 220** **LOW SOLIDS STAINS:** Stains which are formulated to enhance wood grain and change wood color, but not conceal surface grain. For the purpose of this rule, low solids stains are stains that contain up to one (1) pound of solids per one gallon (120 grams of solids per liter) (1 lb/gal) of stain as applied, and include sap stain, toner, and non-grain-raising (NGR) stains.
- 221** **NONPERMANENT FINAL FINISH:** A material such as wax, polish, non-oxidizing oil or similar substance which retains its effect only temporarily and must be periodically reapplied to a surface to maintain or restore the material's intended effect.
- 222** **POUNDS VOC PER POUND OF COATING SOLIDS:** A measurement of a coating's VOC content identical with kilograms VOC per kilogram of coating solids.

- 223 **REPAIR COATING:** A coating used to recoat portions of a previously coated product to cover mechanical damage to that previous coating following normal painting operations.
- 224 **RESTRICTED-USE GUN:** Any spray gun which atomizes coating using compressed air, such that in normal use or a use advertised by the manufacturer or distributor, the ~~tip~~ air cap pressure exceeds 12 psig (0.8 bar) in measurements done pursuant to subsection 502.2 Section 500 of this rule. Restricted-use gun also includes, but is not limited to, all conventional air-atomized spray guns.
- 225 **SEALER OR PRIMER:** A film-building finishing material used to seal the pores of wood or wood-derived material before additional coats of finishing material are applied. Finishing materials used primarily to alter the appearance or color of the substrate, such as stains, washcoats, glazes, inks, and toners, are not sealers.
- 226 **SINGLE RESIN-LAYER FINISH:** A completed, consumer ready finish, which has received only one application of resin-based coating serving as both sealer and topcoat, and having a total average dry finish thickness from the top of the finish to the surface of the wood-product substrate not exceeding 3 mils (0.076 mm) before sanding, as determined pursuant to the test method in ~~subsection 502.3~~ Section 500 of this rule. If a washcoat is also used, the finish is not a single resin-layer finish.
- 227 **STAIN:** A coating, excluding sealers and topcoats, that is formulated to enhance wood grain and change wood color, but not conceal surface grain. Stain includes all high solids stains and all low solids stains.
- 228 **STRIPPABLE BOOTH COATING:** A coating which is applied to spray booth surfaces to receive the overspray and protect the substrate, and which is designed to be readily pulled off in strips or sheets and disposed of.
- 229 **STRIPPING OPERATION:** Any operation in which organic VOC containing solvent is used to remove coating from a substrate.
- 230 **TOPCOAT:** The last permanent, functional film-building finishing material applied to a manufactured wood product. When the wood-product substrate is already sealed with sealer, any further coats that build a functional film are topcoats. Finishing materials used primarily to alter the appearance or color of the substrate, such as stains, washcoats, glazes, inks, and toners are not topcoats. A nonpermanent final finish is not a topcoat.
- 231 **TOUCH UP COATING:** A coating used to cover minor coating imperfections after the main coating operation.
- 232 **TRANSFER EFFICIENCY:** The ratio of the weight of coating solids deposited on an object to the total weight of coating solids used in a coating application step or series of such steps, expressed as a percentage.
- 233 **VOC-BORNE COATING:** A coating in which the volatile portion contains, by weight, more VOC than water.
- 234 **VOC CONTAINING SOLVENT:** A solvent or diluent, used to solvate, dilute, reduce, thin, clean or strip, in which the weight-percent of VOC exceeds the weight percent of water.
- 235 **WASHCOAT:** A transparent special purpose coating having a solids content by mass of 12.0 percent or less, and which is used to seal wood-product surfaces for any of the following purposes: to prevent undesired staining, to control penetration of subsequent finishes, to provide a barrier when paper laminates are applied to the wood-product, to seal glazes, and to improve adhesion of a waterborne topcoat.
- 236 **WOOD FURNITURE AND FIXTURES:** All furnishings made of wood-product that are included in Standard Industrial Classification (SIC) numbers 2434, 2511, 2512, 2517, 2519, 2521, 2531, 2541, or 2599 as well as wood-product on convertible furniture under SIC number 2515.

237 **WOOD-PRODUCT:** Wood or wood-derived material, such as chipboard, particle board, fiberboard, pressed board, paper, and any other material derived from wood, bamboo, cane, or rattan, that retains some of the physical structure(s) of such original material(s), even if only at a microscopic level.

238 **WORKING DAY:** A day, or any part of a day, in which a facility is engaged in manufacturing the application of VOC containing finishing material to wood furniture or fixtures.

SECTION 300 – STANDARDS

301 LIMITATIONS – VOC CONTENT:

301.1 ~~No person~~ An owner or operator shall not apply a topcoat or sealer to wood furniture or fixtures or shall not apply a strippable booth coating unless VOC content is limited to the pounds of VOC per pound of solids (kg VOC/kg solids) or to the grams of VOC per liter the VOC limits in one of the columns in Table 342-2 below:

a. ~~General VOC Limits of Coatings~~

Table 1

	Column A Lb VOC/lb solids	Column B Grams VOC/liter **
Topcoat	1.8	635
Sealer	1.9	645
Acid cured, alkyd amino topcoat	2.0	655
Acid cured, alkyd amino vinyl sealer	2.3	680
**less non-precursor compounds & water		

Table 342-2: General VOC Limits of Coatings

<u>Coating Type</u>	<u>Lb VOC/lb solids is equivalent to kg VOC/kg solids</u>	<u>lb VOC /Gallon*</u>	<u>Grams VOC/liter*</u>
Sealer	1.9	5.38 lb/gal	645 g/l
Topcoat	1.8	5.29 lb/gal	635 g/l
Acid-Cured Alkyd Amino Vinyl Sealer	2.3	5.67 lb/gal	680 g/l
Acid-Cured Alkyd Amino Conversion Varnish Topcoat	2.0	5.46 lb/gal	655 g/l
Strippable Booth Coating	0.8	3.0 lb/gal	360 g/l
Low VOC Topcoat (No VOC limit for Sealer when used with low VOC topcoat)	0.8	3.0 lb/gal	360 g/l
* less non-precursor compounds and water			

b. ~~Option: Lower VOC topcoat and Unlimited Sealer: There is no VOC limit on sealer when the sealer's topcoat does not exceed 0.8 lb VOC/lb (0.8 kg/kg).~~

c. ~~Coatings with no VOC limits: Stains, washcoats, glazes, toners, inks, and other coatings not specified in this subsection 301.1 nor in subsection 301.2 have no VOC limits.~~

301.2 ~~Strippable Booth Coatings: No person shall use a strippable booth coating unless, as applied, the coating has either no more than 0.8 lb VOC/lb solids or no more than 3.0 lb/gal (360 g/l) less non-precursor volatile compounds.~~

301.3 **301.2 Emission Control System (ECS) as an Alternative Control:** A facility may meet the VOC limits of ~~either or both subsections 301.1 and 301.2~~ Section 301.1 of this rule if the owner or operator complies with all provisions in this rule's Appendix C: ALTERNATIVE COMPLIANCE WITH SECTION 301 VOC-LIMITS AND/OR SECTION 302 SPRAY-METHOD RESTRICTIONS BY USING AN EMISSIONS CONTROL DEVICE and with the other applicable provisions of this rule.

301.4 **301.3 Averaging:** An owner or operator of a larger furniture coating facility meeting the applicability requirements of subsection b., in this rule's Appendix A: AN AVERAGING ALTERNATIVE, may comply with ~~subsection 301.1a~~ Section 301.1 of this rule by complying with Averaging-Formula 1 or Averaging-Formula 2 in Appendix A and by complying with all other applicable provisions of Appendix A.

301.5 **301.4 Smaller Source Option:** The owner or operator of a facility that has emitted 2 or more tons but less than 10 tons per year of VOC from all wood coating and associated operations is exempted from all provisions under Sections 300, 400, and 501 (but not Sections 100, 200, and 502) if all provisions are complied with in this rule's Appendix B: A SHORT-FORM OPTION. Sources emitting less than 2 tons of VOC per year may be allowed exemptions pursuant to ~~subsection 307.2d~~ Section 103.2(d) of this rule.

302 **LIMITATION OF CONVENTIONAL AIR-ATOMIZED SPRAY AND OTHER SPRAY METHODS ATOMIZING WITH HIGH-PRESSURE AIR:**

302.1 Evidence of Transfer-Efficient Spray Equipment: ~~No person~~ An owner or operator shall not spray wood furniture with coating exceeding 1 lb VOC/lb solids (1 kg VOC/kg solids) without providing evidence of ~~possession and use or manufacturer's specifications~~ of a low pressure spray gun or system; an HVLP spray gun; an electrostatic system; or a system in which the energy for atomization is provided principally via hydraulic pressure; this includes air assisted airless and ultra-low-volume-air assisted technologies. Such requirement does not apply to any facility, activity or person specifically exempted by applicable subsections of Section 307 Section 103 of this rule, or to any specific system which is approved by the Administrator as ~~having a transfer efficiency consistently exceeding 64%. HVLP-equivalent.~~

302.2 Limitation of Air-Atomized Spray Gun other than Low Pressure or HVLP Spray Guns: ~~No person~~ An owner or operator shall not use a conventional air-atomized spray gun or other restricted use gun, except:

- a. To apply finishing materials that have a VOC content not exceeding 1.0 lb VOC/lb solids (1.0 kg/kg).
- b. If VOC emissions from the finishing application station, employing such a gun, are captured and directed to an ECS, pursuant to the provisions of Appendix C: ALTERNATIVE COMPLIANCE WITH SECTION 301 VOC-LIMITS AND/OR SECTION 302 SPRAY-METHOD RESTRICTIONS BY USING AN EMISSIONS CONTROL DEVICE.
- c. For touch-up and repair under either of the following conditions:
 - (1) such application is performed after completion of the entire finishing operation; or
 - (2) such application is performed after applying stain, and before any further coating, by equipment having a total capacity not exceeding ~~2.4 gallons (8 liters)~~ 2.0 gallons (7.57 liters).
- d. To apply less than 5% of all coating pursuant to ~~subsection 307.2.e~~ Section 103.2(e)(1) of this rule.

303 **OPERATION AND MAINTENANCE:** ~~Any person~~ An owner or operator subject to this rule shall operate and maintain in proper working order all process equipment in which VOC containing materials are used or stored.

304 **VOC LEAK DETECTION AND REPAIR:**

304.1 Leak Inspection: An owner or operator shall conduct a visual inspection once per month of pumps, valves, flanges, or other equipment used to transfer or apply VOC containing finishing materials or VOC containing solvents.

304.2 Leak Repair: The owner or operator shall repair a leak within the time frames as listed below:

- a. A first attempt to repair a leak shall be made no later than 5 working days after the leak was first detected.

b. Final repairs shall be made within 15 working days after the leak was first detected unless the leaking equipment is to be either:

(1) Removed from service within three months after the leak was first detected; or

(2) Replaced by a new purchase within three months after the leak was first detected.

304 **305** **CLEANUP AND CLEANING SUPPLY AND APPLICATION EQUIPMENT:**

304.1 **305.1** **Booth Cleaning:** ~~No person~~ An owner or operator shall not clean spray booth components using a VOC containing solvent containing more than 8.0 percent by weight of VOC, including water and non-precursor compounds, except for: conveyors; continuous coaters and their enclosures; and metal filters and while refurbishing spray booths. If the spray strippable booth coating is being replaced, a person an owner or operator shall not use no more than 1.0 gallon (3.8 liters) VOC containing solvent per booth to clean the spray booth.

304.2 **305.2** **Cleaning Guns and Lines:** ~~A person~~ An owner or operator shall collect all VOC containing solvent used to clean spray guns and shall pump or drain all VOC containing solvent used for line cleaning into non-leaking container(s). Such containers shall be immediately closed or covered after all the VOC containing solvent has been collected, and shall remain so except when in use.

305 **306** **HANDLING AND DISPOSAL OF VOC CONTAINING MATERIALS:**

305.1 **306.1** **Use and Storage:** ~~A person~~ An owner or operator shall cover and keep covered each VOC containing material intended for the day's production, which is not currently in use. A person An owner or operator shall store VOC containing finishing and cleaning materials in closed containers.

305.2 **306.2** **Disposal of VOC and VOC-Containing Material:** ~~A person~~ An owner or operator shall store all VOC containing materials intended for disposal, including, but not limited to, rags, waste coatings, waste solvents and their residues, in closed containers, which are legibly labeled with their contents and which shall remain covered when not in use except when contents are being added or removed.

306 **DESIGNATION OF VOC CONTENT REQUIREMENT:** ~~Effective May 3, 1996, a manufacturer of wood furniture coatings which are subject to this rule shall provide on each coating container or as an accompanying specification of each coating container a designation of VOC content. For topcoats and sealers, this shall be in pounds of VOC per pound of coating solids (g/g) or in pounds VOC per gallon (g/g) less water and non-precursor volatile compounds. This requirement shall not apply to containers having a capacity of one liter (1.05 quart) or less.~~

307 **EXEMPTIONS:**

307.1 **Total Exemption:** ~~The following materials are exempt from this rule: adhesives, architectural coatings, printing ink, and coatings not applied on or over a wood product substrate.~~

307.2 **Partial Exemptions:**

a- ~~Touch up Cans: Coatings in aerosol spray cans not exceeding 22 fl. oz. (0.66 liter) capacity used exclusively for touch up and/or repairs are subject only to the recording requirements of this rule.~~

b- ~~The following shall be exempt from subsection 301.1 and Section 302:~~

(1) ~~The use of the following coating types when the annual total use of all such types together is less than 250 gallons (948 liters): prepackaged aerosol spray cans which are not used for touch up or repair, metal leaf finishes, and faux finishes.~~

(2) ~~Refinishing, Replacement, and Custom Replica Furniture Operations: Any refinishing operation necessary for preservation, to return the furniture or fixture to original condition, to replace missing furniture to produce a matching set, or to produce custom replica furniture.~~

e- ~~The coating for a single resin layer finish which does not exceed a VOC limit of 3 lb VOC/lb solids for completed finishes up to 3 dry mils thickness or does not exceed 2.3 lb/lb for finishes~~

over 3 dry mils is exempt from the VOC limits of subsection 301.1 if all of the following conditions are met:

- (1) The containers are clearly marked "FOR USE IN SINGLE RESIN LAYER FINISH";
 - (2) Facility records clearly identify this material: "DOES NOT MEET THE VOC LIMITS OF SECTION 301, RULE 342. — FOR USE ONLY IN SINGLE RESIN LAYER FINISHES"; and
 - (3) The booth used to apply a single resin layer finish above 2.3 lb VOC/lb solids is dedicated to that operation only, and is clearly labeled "FOR SINGLE RESIN LAYER FINISHES ONLY".
- d. ~~Small Source Status: A furniture coating facility which at any time demonstrates that it currently meets all the requirements in subsections 307.2d (1) and (2) of this rule following, is exempt from all provisions of this rule except for Section 303 "Operation & Maintenance" and Section 305 "Handling and Disposal of VOC". An operator of such an exempted facility shall keep on the premises current records of all coating related materials currently used, and their VOC content. For this purpose, a complete, updated set of receipts/invoices and Material Safety Data Sheets (MSDSs) will suffice if each receipt/invoice is retained on the premises at least two years.~~
- (1) ~~Facility records demonstrate that no more than a total of 55 gallons (209 liters) of VOC-borne wood product coatings plus VOC solvent are used in any month and that such monthly total divided by that month's number of days of coating application does not exceed 3.0 gallons (11.4 liters); and~~
 - (2) ~~The facility emits less than 1814 kg (4000 lb) VOC, facility wide per year from all wood product coating operations including VOC in both solvent borne and water borne coatings, all VOC diluent added to coatings, all solvent cleaning and stripping, and VOC solvent used for coating equipment cleanup.~~
- e. ~~Using Conventional and other Restricted Use Guns; Red Tag: In addition to the uses of restricted use guns allowed under subsections 302.2 a., b., and c., a person may use a conventional air atomized or other restricted use gun to apply coatings exceeding 1 lb VOC/lb if all the following conditions are met:~~
- (1) ~~The volume of such coating applied in this way is less than 5% of the total volume of coating applied at the facility;~~
 - (2) ~~Each gun has a red tag when spraying materials exceeding 1 lb VOC/lb. Requirements for gun tagging are in Section 403;~~
 - (3) ~~A log shall be kept pursuant to subsection 501.2c. of the amount of coating used by each such gun. This shall be done daily or each time coating is added to the gun's coating reservoir; and semi-annual calculation shall be made, pursuant to subsection 501.2.~~

Errata Note¹

- e. ~~Using a Conventional or other Restricted Use Gun Identified by a Red Tag: In addition to uses allowed under subsections 302.2 a., b., and c., a person may use a conventional air atomized or other restricted use gun to apply coatings exceeding 1 lb VOC/lb on the following limited basis:~~
- (1) ~~The volume of such coating applied in this way is less than 5% of the total volume of coating applied at the facility.~~
 - (2) ~~Each gun always has a red tag when applying coatings exceeding 1 lb/lb. Tag requirements are in Section 403.~~
 - (3) ~~A log shall be kept pursuant to subsection 501.2c. of the amount of coating used by each such gun. This shall be done daily or each time coating is added to the gun's coating reservoir; and semi-annual calculation shall be made, pursuant to subsection 501.2c.~~

¹ This errata note is not part of Rule 342. For the reader's convenience, the second subsection 307.2e. was an earlier draft of the section not intended to be left in the rule. It will be removed for the next revision of this rule.

SECTION 400 – ADMINISTRATIVE REQUIREMENTS

401 COMPLIANCE SCHEDULE FOR APPENDIX C: The following schedule applies, with exceptions for an Emission Control System provided in Appendix C.

401.1 Sources Emitting 50 TPY: Each facility which has applied for or received a Title V permit, or a permit with an annual VOC limit of 50 tons or more, or which has had an aggregate VOC emission to atmosphere after December 31, 1989, of 50.0 tons (45.35 Mg) or more in any calendar year or 300 pounds (136 kg) or more in any working day, emitted in compliance with all requirements of this rule and have submitted a Control Plan. The Control Plan shall set forth the maximum VOC content of each coating-as-applied and provide documentation showing how these values were determined.

401.2 Other Sources: ~~The schedule follows for any~~ Any wood furniture and/or fixture facility with total VOC emissions to atmosphere in each of the years 1990 through 1995 of no more than 300 pounds (136 kg) in any working day and 50.0 tons (45.35 Mg) in any calendar year, emitted from wood coating operations and associated cleaning processes; which has emitted more than 25 tons of VOC from coating operations in any of the years 1993 through 1995 must submit a Control Plan, setting forth the maximum VOC content and copies of the documentation showing how the coating-as-applied values were determined.

a. ~~A facility shall be in compliance with all applicable provisions of this rule, except for Section 301 and Section 302 by May 3, 1996. Such facility shall be in compliance with Section 301 and Section 302 of this rule by November 15, 1996.~~

b. ~~Control Plan: A facility which has emitted more than 25 tons of VOC from coating operations in any of the years 1993 through 1995 must submit a Control Plan by August 1, 1996, setting forth the maximum VOC content and copies of the documentation showing how the coating-as-applied values were determined.~~

402 REGULATORY CLARIFICATION

402.1 Status with Respect to Rules 330 and 336: ~~No~~ A wood furniture or fixture coating operation is not subject to Rule 330 or to Rule 336 of these rules.

402.2 Component Materials that were Subject to Prior Regulation: The regulatory status of facilities, owners or operators is not affected by the fact that component materials, such as wood composites or paneling, may have been subject to Reasonably Available Control Technology (RACT) or other regulatory requirements in their original manufacture, before their subsequent use by a facility in Maricopa County.

402.3 Other Rules: Nothing in this rule exempts a person from complying with the NESHAP (National Emission Standards for Hazardous Air Pollutants) for coating wood furniture and fixtures or from complying with any other applicable Federal, states, and local laws or regulations.

402.4 Coating over Wood Coating(s) the same as Coating onto Wood: The VOC-limits for finishing materials given in ~~section 301.1~~ Section 301.1 of this rule apply to such coatings whether applied directly onto any area of wood-product substrate or on any intermediate layer(s) of coating on the wood-product substrate.

403 GUN TAGGING REQUIREMENTS: ~~An owner or operator shall use a red 4 square inch vivid, durable tag, sticker, or painted emblem/label visible on the gun or within 3 ft of the gun on the gun's hose to meet the tagging/labeling requirements of subsection 307.2e.~~

403 ANNUAL OPERATOR TRAINING REQUIREMENTS TO REDUCE VOC EMISSIONS:

403.1 An owner or operator shall train new and existing employees in the coating application, cleanup, and finish equipment operation if the employee uses VOC containing materials. Training must include the following information:

- a.** The proper coating application;
- b.** Cleaning, washoff , and waste procedures;
- c.** Proper finish equipment operation; and
- d.** Methods to reduce solvent usage.

403.2 Employees hired after [adoption date of this rule], shall be trained upon hiring, unless previously trained within the past year.

403.3 Employees hired prior to [adoption date of this rule], shall be trained by [six months after adoption date of this rule].

403.4 Employees shall be given refresher training annually.

403.5 Training records shall be maintained per Section 500 of this rule.

SECTION 500 – MONITORING AND RECORDS

501 RECORDKEEPING AND REPORTING: An owner or operator shall keep the following records and lists in a consistent and complete manner and shall make them available to the Control Officer without delay during normal business hours. Each record shall be maintained a minimum of five years.

501.1 Current List:

- a. VOC Containing Materials:** A current list of all VOC containing material shall be maintained which contains their name or code and their VOC content. Any qualified single resin-layer finish shall be identified as such. VOC containing material list shall be updated by the end of the following month.
- b. How to Express VOC Content:**
 - (1) ~~Non-Coatings: Use grams VOC/liter or lb VOC/gal. for reducers, thinners, cleaners, etc.~~
 - (2) ~~Stains: Use lb VOC/gal.~~
 - (3) ~~Topcoats and Sealers: Use either lbs VOC/lb solids or g VOC/liter (lb VOC/gal) except:~~
 - (a) ~~Any topcoat or sealer sprayed with a conventional or other restricted use gun shall be expressed in lbs VOC/lb solids.~~
 - (b) ~~Two VOC content values must appear for each topcoat and each sealer that is expressed as grams VOC per liter or pounds VOC per gallon: both grams VOC/liter (lb VOC/gal) including water and non-precursor organic compounds, and grams VOC/liter (lb VOC/gal) less water and non-precursor organic compounds.~~
 - (4) ~~Other Coatings: Use grams/liter (or lb/gal) or lbs VOC/lb solids for coatings that are neither sealers nor topcoats, such as washcoats, glazes, etc.~~
- e. Acceptable Format:** VOC containing materials shall be listed neatly and completely. The following is an example of an acceptable method:

~~Example: Identify and list each VOC containing material in one of the following 6 categories: 1. topcoats; 2. sealers; 3. catalyst/hardeners; 4. diluents, such as reducers, coating solvents and thinners; 5. cleaning and stripping solvents; and 6. other VOC containing materials. Next to each material, record the VOC content found on the container, an MSDS, an invoice, or other source.~~

- ~~d.~~ **b.** **Mix Ratios:** A current list of VOC containing mix ratios for catalyst/hardeners shall be maintained ~~if~~ of the manufacturer's recommended mix ratio is not followed or of components, including but not limited to adding reducers and catalyst/hardeners, except when the manufacturer has no recommendations ~~for any additions.~~

501.2 Schedule for Recording Material Usage:

- a. Daily Updates for Non-Compliant Material:** The amount of each working day's use of each topcoat, sealer or booth material that exceeds applicable VOC limits of Section 301 or Section ~~304~~ 305 of this rule shall be totaled and logged by the end of the following ~~workday~~ working day. VOC content shall be entered for each such material.
- b. Monthly Update for Materials Compliant with Sections 301 and ~~304~~ 305 of This Rule:** By the end of the following month, an owner or operator shall update the following records for each month:
- (1) For each topcoat and sealer to which reducer is added at any time after its arrival at a facility, enter the VOC content in lb VOC/lb solids or in ~~grams/liter (lb/gal)~~ lb VOC/gal (grams VOC/liter), less water and non-precursor organic compounds. This requirement shall not apply if the reducer is itself compliant with respective topcoat's and sealer's VOC limit in Table 342-2 of this rule.
 - (2) The amount of coating, the amount of catalyst/hardener, and the amount of reducer/coating diluent used.
 - (3) The quantity and ~~type~~ name of ~~organic~~ VOC containing solvent used each month for stripping and cleaning.
 - (4) The quantity of ~~organic~~ VOC containing solvent disposed of offsite during the month just ended.
 - (5) **Exception:** Update yearly the totals of the usage of each VOC containing material known to be used in amounts less than 15 gallons (57 liters) per year.
- c. Semi-Annual Updates of Coatings Applied with Restricted Use Gun:** Records associated with the Section 302 limitations on the use of conventional air-atomized spray equipment and other restricted-use guns shall be kept. These records shall show for each semi-annual period the volume (VR) of finishing materials exceeding solids (1 lb VOC/lb solids) (1 kg VOC/kg solids) applied with conventional air-atomized spray guns and other restricted use guns. In addition, the total volume of all finishing material (AMV) used throughout the facility shall be determined. The total volume (VR) so applied over the previous six-months is divided by the total of all coatings used in the same period (AMV) and these calculations and the result are entered in the log.

501.3 Disposal/Recovery: An owner or operator shall keep records of disposal/recovery of all VOC-containing materials.

501.4 Monthly VOC Leak Detection Inspection And Repair Records: The owner or operator shall maintain monthly leak detection and repair records that document, at a minimum, the following:

- a.** Name of owner or operator conducting the leak detection inspection.
- b.** The date the inspection was conducted.
- c.** The equipment inspected.
- d.** Any leaks that were detected or, note if no leaks were detected.
- e.** If a leak was detected, then include all of the following information on the inspection record:
 - (1) The date the leak was detected.
 - (2) The date of the first attempt of repair.
 - (3) The results of the first attempt of repair.
 - (4) The date and results of subsequent repairs, if necessary.

- (5) The results and date of the final repair.

501.5 Annual Operator Training Records Required by Section 403 of this Rule: The owner or operator shall maintain a copy of the training program and shall include, at a minimum, the following:

- a. A list of employees trained and date trained; and
- b. Training material used for training.

502 COMPLIANCE DETERMINATION – TEST METHODS: ~~When more than one test method is permitted for a determination, an exceedance of the limits established in this rule, as determined by any of the applicable test methods, constitutes a violation of this rule. An exceedance of the limits established in this Rule 342, determined by any of the applicable test methods, constitutes a violation of this rule. The EPA test methods and other documents as they exist in the Code of Federal Regulations (CFR) as listed below, are adopted and incorporated by reference in Appendix G of the Maricopa County Air Pollution Control Regulations. These documents are available at the Maricopa County Air Quality Department, 1001 N. Central Ave., Phoenix, AZ 85004.~~

~~502.1 Measurement of VOC content, pursuant to the VOC limits of subsections 301.1, 301.2, and 302.2, and subsections 304.1 and 307.2e., shall be conducted and reported in accordance with EPA Test Method 24 (40 CFR 60, Appendix A). Acetone content shall be determined within the context of Method 24 by EPA Method 311 or other method acceptable to EPA. Multi part coatings including those with reactive diluent(s) shall be tested by Method 24 procedures.~~

502.1 Measurement of VOC Content: 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-7) shall be used to determine the VOC content and the solids content by weight of the coating materials.

502.2 Measurement of air pressure at the center of the spray gun ~~tip air cap and air horns~~ of a conventional air-atomized spray gun (reference Section 302) shall be performed using a device in proper working order supplied by the gun's manufacturer for performing such a measurement.

502.3 Measurement of mil thickness to determine compliance with single resin-layer finish parameters in Section 227 of this rule and ~~subsection 307.2e~~ Section 103.2(c) of this rule shall be performed by draw bar and calculations using the weight and area of the film and the density of the cured coating solids, by a Tooke Inspection Gage according to the instructions of its manufacturer, or by other means used for the purpose by a major coating manufacturer's laboratory or quality control.

APPENDIX A TO RULE 342 AN AVERAGING ALTERNATIVE

- a. **Purpose:** The averaging provisions of this Appendix to Rule 342 allow the owner or operator of a furniture coating facility, which meets eligibility requirements, increased options in choosing coating types. These provisions expand the range of the allowable VOC contents of coatings while limiting overall VOC emissions to amounts less than would be emitted at the VOC-content limits of ~~subsection~~ Section 301.1 of this rule.
- b. **Eligibility to Apply:** The owner or operator of any furniture coating operation, reasonably capable of annually emitting more than 25 tons of VOC and having at least one of the following four statuses with respect to VOC emissions, may apply to average:
 - (1) Has emitted more than 25 tons (21.7 Mg) of VOC in any year since 1989 and has a Maricopa County Air Quality Permit or is under consideration for such permit by the Control Officer;
 - (2) Has in its permit a VOC-emissions limit of 50 tons or more;
 - (3) Has applied for or received Title V status.
- c. **How to Apply:** An applicant shall submit a request for eligibility to the Control Officer. This request shall include a summary of the chief reasons for requesting eligibility for averaging.
 - (1) The Control Officer shall provide a brief questionnaire eliciting responses intended to reveal whether the operator has sufficient understanding and preparation to successfully average. This questionnaire shall

require a sample of their intended recordkeeping format along with calculations containing the expected amount and VOC-contents of coatings intended to be used in averaging.

- (2) The Control Officer may request confirmation, correction, or clarification from the owner or operator for responses to the questionnaire that are questionable; that appear unclear, erroneous, incomplete, or non-pertinent, or for which there is contrary evidence.
- (3) The owner or operator shall submit a correctly completed questionnaire, signed by a responsible officer of the facility, no later than 14 calendar days prior to the first day of averaging.
- (4) Control Officer approval of the completed questionnaire shall constitute an acceptance of application for minor permit revision. The Control Officer may request additional information characteristically required for minor revisions to the permits of wood furniture coaters as a class.
- (5) Control Officer approval does not necessarily constitute satisfaction of all federal requirements nor preempt the EPA Administrator's asserting a right of approval.

d. Definitions of Terms used in an Averaging Regime, For the Purposes of the Provisions Of This Appendix to Rule 342.:

(1) CERTIFIED PRODUCT DATA SHEET: A document provided by a coating supplier stating precisely the maximum VOC content of a particular coating as supplied. The maximum VOC content of a particular coating may be expressed as the VOC content by percent weight or VOC content Pounds per Gallon and Solid Content by percent weight or percent Non-Volatile and Density; or for any of these described expressions, equivalent information is acceptable.

~~(+)~~**(2) CREDIT CONSUMING COATING (EXCEEDING COATING):** In an averaging regime, coating with average VOC content exceeding the neutral point for its particular coating type, such as topcoat, sealer, etc. A credit consuming coating requires the use of credit generating coating(s) in order that the combination of all coatings in use will not exceed the limit set by the left side of the averaging formula.

~~(+)~~**(3) CREDIT CONSUMING PIECE/EXCEEDING PIECE:** In an averaging regime, a piece of furniture which is a member of a model-line of furniture receiving such a high proportion of credit-consuming coating that when the VOC contents and coating quantities received by the model-line, are entered into an averaging formula of Section i., the sum yielded by the right side of the formula is consistently larger than the sum yielded by the left side of the formula.

~~(+)~~**(4) CREDIT GENERATING COATING:** A coating which has VOC content well below the neutral point and, thus, is used in an averaging regime to create surplus VOC credit(s) to offset the excess emissions of particular credit consuming coating(s).

~~(+)~~**(5) CREDIT GENERATING PIECE:** In an averaging regime, a piece of furniture which is a member of a model-line of furniture receiving so much credit generating coating that when the VOC contents and coating quantities, received by the model-line, are entered into an averaging formula, the sum yielded by the right side of the formula is consistently less than the sum yielded by the left side of the formula.

~~(+)~~**(6) NEUTRAL POINT:** The particular number representing the VOC content of a particular coating type having the mathematical property that if it is included in an averaging formula it has no effect on the numerical results of the formula, regardless of how much of the coating is used. The neutral point VOC content for each affected coating-type is as follows:

Using Formula 1:

Topcoat neutral point - ~~0.72 kg VOC/kg~~ 0.72 pound VOC per pound coating solids (kg VOC/kg solids). (Stains, sealers, etc. do not appear in Formula 1)

Using Formula 2:

The neutral point VOC content for each of the 5 types of coating in Formula 2 is as follows:

Table 342-3 Formula 2 Neutral Point VOC Content of Coating

Coating Type	VOC Content Neutral Point	VOC Content Neutral Point
Topcoat	1.62 lb VOC/lb solids	1.62 kg VOC/kg solids
Sealer coat	1.71 lb VOC/lb solids	1.71 kg VOC/kg solids
Washcoat	8.1 lb VOC/lb solids	8.1 kg VOC/kg solids
Basecoat	1.08 lb VOC/lb solids	1.08 kg VOC/kg solids
Stain	5.942 lb VOC/gallon	0.712 kg VOC/liter

The neutral point VOC content for each of the 5 types of coating in Formula 2 is as follows: Topcoat 1.62 kg VOC/kg solids; sealer coat 1.71; washcoat 8.1; basecoat 1.08

The neutral point for stains is expressed in kilograms VOC per liter of coating 0.712 kg VOC/liter

e. Basic Requirements for all Averaging Regimes:

- (1) **Entire Workdays Working Days:** Averaging regimes must be in place for no less than an entire 24 hour period and at all times during such 24-hour period. Normally, a ~~workday~~ working day will be the calendar day in which work commences. However, an owner or operator may designate in writing a ~~workday~~ working day schedule beginning and ending at a specific time between 12 midnight and 4:30 AM if the last shift normally ends between midnight and 4:30 AM, unless the Control Officer issues written disapproval. The times of the averaging ~~workday~~ working day may be changed if written notification has been given the Control Officer at least five ~~workdays~~ working days before the start of the intended new schedule, and no communication of disapproval has been issued within this time by the Control Officer.
- (2) **Averaging Applies Plant-Wide:** An averaging regime applies throughout a facility to all production furniture coating occurring during all 24 hours of a ~~workday~~ working day for which an averaging regime is declared.
- (3) **No Exemption for Single Resin-Layer Finishes or Acid-Cured, Alkyd Amino Coatings:**
 - (a) In averaging regimes using Formula 2, for surfaces which receive in total only one application of film building coating, the neutral point for that coating shall be the same as that for a sealer, 1.71 lb VOC/lb solids ~~kg VOC/kg solids~~ (1.71kg VOC/kg solids), and it shall be totaled with sealers in the averaging formula.
 - (b) Acid-cured, alkyd amino coatings, with or without vinyl chemistry, shall have the same neutral points in Formula 2 as do other sealers (1.71 lb VOC/lb solids) and topcoats (1.62 lb VOC/lb solids) ~~(1.71 and 1.62, respectively)~~ and shall be totaled in with the other sealers and topcoats in Formula 2.
- (4) **Identifying Credit Consuming Models:** Each furniture/finish model must be identified which on average does not by itself (i.e., by the combination of all coatings it receives) meet the applicable averaging formula (and must be offset by models whose coatings generate VOC credits). The model name and/or code of each credit consuming model must be identified in a permanent record for that purpose, along with a designation indicating that the model produces excess emissions. This designation can be the average grams of VOC above the formula limit, the maximum grams above the limit, number of exceeding grams at the first standard deviation, relative risk, or other term(s) created by the owner or operator that fulfill this purpose for the facility.
- (5) **Exemption for Physically Separated Lines:**
 - (a) At the Control Officer's discretion, an exemption from the requirement that the entire facility participate when an averaging regime is in effect can be granted for an additional coating line if: Such a coating line is both physically separate from the operations involving averaging and all monitoring, recordkeeping, and coating equipment including coating reservoirs are kept separate from the monitoring, recordkeeping and coating equipment participating in an averaging regime. The burden of

demonstration is on the owner or operator that there is no significant risk of confounding enforcement, monitoring, recordkeeping, and equipment activities between the lines.

(b) Dual Averaging Regimes: A facility which has received such a subsection e.(5)(a) exemption has the option of running each separated line using an averaging regime. However, all requirements of this rule must be complied with by each separated line.

(6) Declaration of Averaging: On any working day of a Control Officer presence at a facility permitted to average, the owner or operator shall correctly announce without delay whether an averaging regime is currently in effect, and on an averaging working day shall also forthwith supply a listing of each coating participating in the averaging formula, along with the VOC content and the coating category of each.

f. Recordkeeping and Monitoring: In addition to the requirements of Section 501 of this rule, an owner or operator shall do the following:

(1) Daily List the Components: Prior to applying any coating on an averaging working day, a list shall be made of each coating name/code to be used that working day in the averaging formula and its expected VOC content as applied. This list shall be available to the Control Officer without delay.

(2) Daily calculation Deadline: After each working day using averaging, an owner or operator shall determine the results of averaging for that completed ~~production~~ working day by midday on the next ~~workday~~ working day. These results shall be put into hardcopy in the same format that the owner or operator used in the approved application questionnaire. Some other format may be used if the Control Officer has given the format approval before beginning averaging.

(3) Log in: An owner or operator shall arrange and keep the hardcopy results of each working day's averaging in a form that allows the results of each averaging working day within the 13 months prior to a Control Officer visit to be accessed by the Control Officer without delay.

(4) Content of Weekly Summary of Production-Coating: By the end of the first shift of the workweek, totals for the workweek just completed shall be compiled as follows:

(a) For each model and color, the total number of furniture pieces coated;

(b) The name and quantity applied for each stain, washcoat, basecoat, sealer, topcoat, and diluent recorded. The quantity of stain shall be expressed in liters; the quantity of the other coatings expressed in kilograms;

(c) The VOC content for each such coating and diluent, expressed in lb VOC/lb solids or kg VOC/kg solids; and the non-precursor organic compound (NP) content of each, expressed either in kg NP/kg solids or kg NP/kg coating-including-NP shall be recorded, except that the VOC content of each stain shall be expressed in kg VOC per liter of coating, including any water or non-precursors.

(d) Monthly Totals for Non-Averaged Coatings: For coatings that do not participate in the averaging formulas, the total kilograms used shall be updated monthly. Coatings of the same type may be totaled together under a single VOC-content value if their VOC contents are within $\pm 2\%$ of that value.

(5) Handling Unavoidable Data Loss and Data Processing Equipment Malfunctions: An owner or operator shall put an accounting system in continual effect that allows the retrieval or reconstruction of data. When data required by this rule is lost, the Control Officer shall be notified forthwith and such data shall be reconstructed and due calculations completed within two ~~facility workdays~~ working days. The Control Officer may request that a hardcopy of the retrieved information be provided him/her by the same clock time, two ~~workdays~~ working days hence.

(6) Report Submittal Schedule:

(a) Semi-Annual Reports: An owner or operator shall submit a summary of the records, including all exceedances, by July 20 for the first half of the year and by January 20 of the following year for the second half. Included shall be certified product data sheets for coatings whose VOC content is

determined by the supplier and not directly by the facility, and a statement that the coatings for which certified product data sheets are submitted were the coatings actually used. All the foregoing shall be certified to and signed by a responsible official of the facility.

- (b) **Initial Compliance Report:** Within 60 days after the third working day ever of averaging, an owner or operator shall submit a report to the Control Officer containing all the elements required by subsection f.(6)(a) above.

g. Test Procedures and Requirements:

- (1) An owner or operator shall cause to be performed EPA Test Method 24 —Determination of Volatile Matter Content, Water Content, Density, Volume Solids, and Weight Solids of Surface Coatings, tests on a sample of each coating intended to be used in an averaging regime, prior to using such coating in any averaging regime. These samples shall be taken at three levels of dilution: prior to adding any diluent; with the minimum weight of VOC containing solvent/diluent typically used; and with the maximum weight of VOC containing solvent/diluent expected ever to be needed.
- (2) An acetone determination shall be made in conjunction with Method 24 using EPA Test Method 311 - Analysis of Hazardous Air Pollutant Compounds in Paints and Coatings by Direct Injection Into a Gas Chromatograph; or other method approved by EPA at the three dilution levels stipulated in subsection g.(1).
- (3) **The Status of Certified Product Data Sheets:** After the initial Method 24 tests pursuant to subsection g.(1), an owner or operator may substitute the specific certified product data sheet, based on Method 24, for any coating for any of the three levels of dilution stipulated in subsection g.(1), in lieu of directly overseeing the Method 24 tests.
- (a) However, a certified product data sheet is not valid and shall not be submitted if it is neither for a dilution level in subsection g.(1) nor for the actual dilution level of a coating as applied during averaging.
- (b) When the results of a Method 24 test, performed pursuant to a Control Officer initiative or directive, differ from the certified product data sheet, the Control Officer may require an owner or operator to have Method 24 tests conducted at a testing facility agreed to by the Control Officer and may require that the results of such tests be the values used in calculating averages.

h. Sanctions:

- (1) If an exceedance of the limits of an averaging formula is determined to be in violation of this rule, at least two violations may be charged: at least one violation for exceeding the limits in ~~subsection 301.4~~ Section 301.1 and a separate violation for exceeding the limit determined by the averaging formula in Section i. of this Appendix. Unless the Control Officer chooses otherwise, the number of violations issued for an exceedance of an averaging limit shall be one greater than the number of exceeding coatings participating in the averaging formula. Each working day the average is exceeded will be counted as a separate incident.
- (2) **Continuance:** The Control Officer may disallow an owner or operator the continuance of averaging at a facility which has failed to comply with one or more provisions of this Appendix on three separate working days in any period of 12 consecutive months, or which has been found guilty of a major violation of such provisions, except as prohibited by other rule or statute.

i. Two Averaging Formulas: The following are the two mathematical formulas from which one may be chosen to be used for an averaging regime.

- (1) If topcoats consistently average less than 0.72 kg VOC per kg solids on a mass solid basis, an owner or operator may use Formula 1.

$$\sum_{i=1}^n 0.72(TC_i) \geq \sum_{i=1}^n ER_{TC_i}(TC_i) \quad \text{Formula 1}$$

(2) For other coating systems using averaging, Formula 2 shall be used.

$$\sum_{i=1}^n 1.62(TC_i) + 1.71(SE_i) + 8.1(WC_i) + 1.08(BC_i) + 0.712(ST_i) \geq \sum_{i=1}^n ER_{TC_i}(TC_i) + ER_{SE_i}(SE_i) + ER_{WC_i}(WC_i) + ER_{BC_i}(BC_i) + ER_{ST_i}(ST_i) \text{ Formula 2}$$

where:

- N = number of finishing materials participating in averaging;
- TC_i = kilograms of solids of topcoat i used;
- SE_i = kilograms of solids of sealer i used;
- WC_i = kilograms of solids of washcoat i used;
- BC_i = kilograms of solids of basecoat i used;
- ST_i = liters of stain i used (water and any non-precursor content are not subtracted);
- ER_{TC_i} = VOC content of topcoat i in kg VOC/kg solids, as applied;
- ER_{SE_i} = VOC content of sealer i in kg VOC/kg solids, as applied;
- ER_{WC_i} = VOC content of washcoat i in kg VOC/kg solids, as applied;
- ER_{BC_i} = VOC content of basecoat i in kg VOC/kg solids, as applied; and
- ER_{ST_i} = VOC content of stain i in kg VOC/liter, as applied.

- j. Pre-RACT Coating use is Limited: If a coating was used before 1993, and is still used for the same purposes, and it had a VOC content then which is lower than the neutral point for that coating type, then that coating may only be used in the averaging equation if the coating is now lower in VOC than before 1993. If that coating is used in averaging, the left side of the averaging formula must reflect the pre-RACT VOC content and not the current RACT neutral point for that type of coating. To effect this, additional mathematical terms must be added, one on the left and one on the right side of the formula. For example, if one can prove one used a high solids topcoat at 1.5 kg VOC/kg solids before 1993 (the year regulation negotiations began) and now thin the same product less so that it is consistently less than 1.5 kg/kg, one can enter it as a separate term. It appears in the formula below as “1.5(TU)” where “TU” stands for the total kilograms of solids of this unique topcoat used during an averaging working day. “TU” appears on both sides of the inequality sign. ER_U is the actual VOC content that was in this unique topcoat on a particular averaging working day. Along with this, the meaning of the term (TC_i) becomes slightly altered to mean the total topcoat solids used of every other topcoat beside the unique topcoat “U”:

$$\sum_{i=1}^n 1.62(TC_i) + 1.5(TU) + 1.71(SE_i) + 8.1(WC_i) + 1.08(BC_i) + 0.712(ST_i) \geq \sum_{i=1}^n ER_{TC_i}(TC_i) + ER_U(TU) + ER_{SE_i}(SE_i) + ER_{WC_i}(WC_i) + ER_{BC_i}(BC_i) + ER_{ST_i}(ST_i)$$

Similarly, any other unique coatings that meet such requirements and are used in averaging must each have its own set of two terms inserted into the averaging formula. Moreover, once a pre-RACT coating is used in averaging, the term for its VOC content must stay in the equation as long as that pre-RACT coating is used, even if one later needs to raise the VOC content of the pre-RACT coating to a level above its historical VOC content.

APPENDIX B – A SHORT-FORM OPTION

- a. Applicability:** This Appendix B to Rule 342 only applies to operators of facilities which have a permit or permit modification limiting VOC emissions from all wood furniture and millwork coating to less than 10 tons, and the permit or Control Officer states in writing that this Appendix B applies. For those facilities for which this Appendix B does apply, no provisions within Sections 301 through 501, inclusive, shall be used to substitute for provisions in this Appendix B. Facilities subject to this Appendix B are also subject to all of Sections 100, 200, and 502.
- b. Definitions:** For the purposes of this Appendix B, the following definition shall apply:
- (1) **MINUS EXEMPT MATERIALS (MINUS EXEMPTS):** Means the same as “less water and non-precursor organic compounds” in specifying VOC content.
- c. VOC Limits for Topcoats and Sealers**
- (1) **The Principal VOC Limits:** Meet either the lbs VOC/lb solids limit or the lbs VOC/gal, minus exempts, limit: All sealers and topcoats: 2 lbs VOC/lb solids (2 kg VOC/kg solids) or 5.45 lb VOC/gal (653 g/l).
- (2) **VOC Tradeoff Options:** These 2 options each require special conditions.
- (a) **Low VOC topcoat with Higher VOC Sealer:**
- Low VOC topcoat: 0.8 lb VOC/lb solids OR 3.83 lb/gal (455 g/l) limit for topcoat.
- Higher VOC sealer: no VOC limit for sealer under such topcoat.
- (b) **One-Step Finish:**
- Higher VOC combination sealer and topcoat: 3 lb VOC/lb solids (3 kg VOC/kg solids) OR 6.0 lb/gal limit (719 g/l).
- The 2 Conditions:
- I. A single wet application of either sealer or topcoat (not both)
 - II. Thickness of the dry finish cannot exceed 3 dry mils, as determined by the test method in ~~subsection~~ Section 502.3 of this rule.
- d. Spray Method Requirements:**
- (1) **Have Guns with Higher Transfer:** If you spray coating having over 1 lb VOC/lb solids you must use and have in evidence for an inspector at least one of the following onsite:
- Low pressure gun with less than 12 psig at ~~tip~~ air cap. ~~Examples: pure HVLP gun; a turbine gun.~~
 - An HVLP gun or a turbine gun with 10 psig or less at air cap.
 - Airless; includes air-assisted airless.
 - An electrostatic system.
- (2) ~~Green Tag Option: Restriction on conventional guns and other restricted use guns:~~ **Conventional Spray Gun Restriction:**
- (a) ~~Green Tag Requirements: A conventional air atomized or other restricted use gun shall have a durable and visible green tag, sticker, or painted emblem, no less than 4 square inches in area on the gun or within 3 ft of the gun on the gun's hose, or the facility is in violation. But, such a tag is not required at a facility having and using only coatings which contain less than 1 lb VOC/lb solids as applied. Coatings which have less than 4.30 lb VOC/gal (515 g/l) minus exempt materials also meet this requirement.~~
- (b) ~~Prohibition: No coating over 1 lb VOC/lb solids may be applied with a conventional air-atomized or other restricted use gun unless the coating meets the requirements of Section 103.2.e of this rule. This prohibition includes, but is not limited to, traditional lacquers,~~

washcoats, and low-solids stains. (~~“Conventional air atomized gun” is defined in Section 208. “Restricted use gun” is defined in Section 225.~~)

- (3) **Exemptions from VOC and Spray-Method Limits:** Prepackaged aerosol spray in cans under 22 fl. oz., faux & metal-leaf finish are exempt from Appendix B’s subsections c.(1) and (2) and d.(1) and (2) as is any refinishing operation necessary for preservation, to return furniture to original condition, to replace missing furniture items to complete a matching set, or to produce custom replica furniture. But nothing exempted by the previous sentence is exempt from inventory of VOC emissions or from other provisions of this Appendix B.

e. Housekeeping Functions:

- (1) ~~Keep Coatings~~ **VOC Containing Material, Cleaners, & Waste-Materials Covered:** Coatings and cleaners not in use, as well as waste coatings, cleaning materials including VOC containing solvent-dipped rags, and VOC containing solvent used to clean spray equipment must be collected into a closed container or a container which is closed immediately after receiving such material.
- (2) **Booth Cleaning:** If booth/components other than metal filters are cleaned with VOC containing solvent, no VOC containing solvent which is more than 3.8 ~~lb/VOC per gallon~~ lb VOC/gal (455 g/l) shall be used. However, up to 1 gallon of solvent over 3.8 lb VOC/gal (455 g/l) may be used for cleaning a booth as part of replacing coating on the booth.

- f. Records:** Keep a list of all VOC containing material with the name and amount of VOC in each: Express VOC content either as ~~lb/lb~~ lb VOC/lb solids or ~~lb/gal~~ lb VOC/gal. For topcoat and sealer contents which are expressed in lb VOC/gal, this must be minus water and non-precursors.

(1) If you ever do your own Reducing or Thinning of a Sealer or Topcoat:

Keep a list of the maximum VOC content of any material after you thin it or add any additives at your facility.

- (2) **Keep Receipts for 5 Years** of the amount received for each VOC-containing material and of the amount of all VOC-containing waste materials sent for recycling or hazardous waste collection.

- (3) **What to Record and How often:** Record the amount in the following 4 categories, (a) to (d), noting either the amount “used” or the amount “received” since your last records update:

- (a) All coatings including topcoats, sealers, stains, etc., including all parts, catalysts, activators, additives, hardeners; (not reducers). If you use conventional guns at all, total separately the coatings having less than 1 lb VOC/lb solids;
- (b) All VOC containing reducers and diluents to be used for reducing or diluting coatings (not cleaning);
- (c) All VOC containing solvents, strippers, thinners, and VOC-containing materials used for cleaning and cleanup (not reducing); and
- (d) All other VOC containing materials connected with wood coating. Omit janitorial & building maintenance.
- (e) **How often to Update your Records:** Update the above items in (a), (b), (c), and (d) weekly if your total monthly use of all coatings and diluents [(a) + (b)] is 250 gallons or more. Otherwise, update monthly. You may record just once a year those types of materials you use less than 15 gallons of.

Example: I use 5 kinds of graining ink. Added all together, I use 14 gallons of all graining ink combined: I only have to update my graining inks once a year.

APPENDIX C TO RULE 342
ALTERNATIVE COMPLIANCE WITH SECTION 301 VOC-LIMITS AND/OR SECTION 302 SPRAY-METHOD RESTRICTIONS BY USING AN EMISSIONS CONTROL DEVICE

- a. **Eligibility:** A person is allowed to meet the VOC limits of either or both ~~subsections 301.1 and 301.2~~ Sections 301.1 and 301.2 of this rule by using an ECS which reduces VOC emissions overall, including capture and processing, by at least 81 percent by weight. Such an ECS may also be used to comply with ~~subsection 302.2~~ Section 302.2 of this rule spray method provisions.
- b. **Operation and Maintenance (O&M) Plan Required for ECS:**
- (1) The owner or operator of an emission control system (ECS) used to meet the requirements of Section 301 of this rule shall provide the Control Officer with an Operation and Maintenance (O&M) Plan. This O&M Plan shall specify key system operating parameters, such as temperatures, pressures and/or flow rates, necessary to determine compliance with this rule, and describe in detail procedures and their frequency of implementation needed to maintain the ECS.
 - (2) The Control Officer's written approval of the O&M Plan is required. The owner or operator shall consistently implement all provisions of the O&M Plan.
 - (3) **Changes in Frequency:** Changes involving reduction in the frequency or extent of procedures or parameters in a Control Officer-approved O&M Plan shall have the written consent of the Control Officer prior to being implemented.
 - (4) **Other Changes:** An updated O&M Plan must be submitted to the Control Officer for review within 10 days of any changes not involving reduction in frequency or extent of procedures or parameters of an approved O&M Plan. Within five working days of a written disapproval of such changes, either the original O&M Plan shall be reinstated or an alternative plan, negotiated with the affected facility and approved in writing by the Control Officer, shall be instituted.
- c. **Providing and Maintaining ECS Monitoring Devices:** Any person operating an emission control system (ECS) pursuant to ~~subsection 301.3~~ Section 301.3 of this rule shall install, maintain, and calibrate monitoring devices described in the O&M Plan submitted to the Control Officer pursuant to subsection b. of this appendix. The monitoring devices shall measure temperatures, pressures, rates of flow, or other operating conditions necessary to determine if air pollution control equipment is functioning properly.
- (1) **ECS Operation and Maintenance Records:** On each working day that an ECS is used to comply with Section 301 of this rule, an owner or operator shall make a permanent record of the operating parameters of the key systems described in the O&M Plan. For each working day or period in which the O&M Plan requires that maintenance be performed, a permanent record shall be made of the maintenance actions taken, within 24 hours of maintenance completion. An explanation shall be entered for scheduled maintenance that is not performed during the period designated in the O&M Plan.
 - (2) **Other Records Required when Complying Via ECS:** An owner or operator choosing to meet the requirements of Section 301 through the use of an ECS shall maintain, in addition to the monthly records required by ~~subsection 501.2~~ Section 501.2 of this rule:
 - (a) Daily documentation showing the VOC content of the finishing material, as applied, in pounds VOC/pound solids when VOC containing solvent or other VOC is added to the finishing material before application.
 - (b) Daily records showing the amount of coating, the amount of catalyst/hardener, and the amount of VOC containing solvent, reducer, and/or diluent used.
- d. **Compliance Schedule for ECS:** An owner or operator of a wood furniture coating facility shall have such facility in compliance per the following schedule. Total VOC emissions is the total VOC from all wood coating operations and associated cleaning processes. It includes millwork coating.
- (1) **Sources Emitting 50 TPY:** ~~The owner or operator of a wood furniture coating facility shall be in full Full~~ compliance with all applicable requirements of this rule ~~shall be by November 15, 1996~~, if such facility has applied for or received a Title V permit, its permit has a VOC-emissions limit of 50 tons or more, or which has had an aggregate VOC emission to atmosphere after December 31, 1989, of 50.0 tons (45.35 Mg) or

more in any calendar year or 300 pounds (136 kg) or more in any working day. In addition, an owner or operator shall provide the Control Officer with:

(a) Both proof of a binding contract for an ECS and a compliance plan ~~by June 3, 1996~~, listing dates of completion of increments of progress toward meeting the requirements of ~~subsection 301.3~~ Section 301.2 of this rule.

(b) An O&M Plan for the ECS ~~by November 15, 1996~~.

(2) **Other Sources:** ~~A~~ The owner or operator of a wood furniture coating facility shall be in compliance with Section 301 and Section 302 of this rule by November 15, 1996 and with Section 301 by January 15, 1997, if its the total VOC in each of the years 1990 through 1995 ~~of is~~ less than 300 pounds (136 kg) in any working day and 50.0 tons (45.35 MG) in any calendar year. In addition, the owner or operator shall provide the Control Officer with:

(a) Both proof of a binding contract for an ECS and a compliance plan ~~by June 3, 1996~~, listing the dates of completing the increments of progress toward meeting the requirements of the ~~subsection 301.3~~ Section 301.3 of this rule; and

(b) An O&M Plan for the ECS ~~by January 2, 1997~~.

e. Test Methods for an ECS

(1) Control efficiency of an emission control device used to meet the requirements of Section 301 shall be determined according to EPA ~~Reference~~ Test Method 25 —Determination of Total Gaseous Nonmethane Organic Emissions as Carbon or an applicable submethod of Method 25 (Title 40, CFR Part 60, Appendix A).

(2) EPA Test Method 18—Measurement of Gaseous Organic Compound Emissions by Gas Chromatography shall be used if specified by the Control Officer when a non-precursor organic compound is present in the input of a control device used to meet the requirement of Section 301 of this rule.

(3) Capture efficiency of an emission control device used to meet the requirements of Section 301 shall be determined by mass balance in combination with ventilation/draft rate determinations done in accordance with subsection e.(4), following, or according to "Guidelines for Determining Capture Efficiency" January 9, 1995, Candace Sorrell, Source Characterization Group A, Office of Air Quality Planning and Standards, US EPA. This EPA document is available at the Maricopa County Air Quality Department, 1001 N. Central Ave., Phoenix, Arizona, 85004.

(4) Ventilation/draft rates of an emission control device used to meet the requirements of Section 301 of this rule shall be determined by one or more of the following EPA Test Methods: 2, 2A, 2C, or 2D:

a. EPA Test Method 2—Determination of Stack Gas Velocity and Volumetric Flow Rate (Type S Pitot Tube)

b. EPA Test Method 2A—Direct Measurement of Gas Volume Through Pipes and Small Ducts

c. EPA Test Method 2C - Determination of Gas Velocity and Volumetric Flow Rate in Small Stacks or Ducts (Standard Pitot Tube)

d. EPA Test Method 2D—Measurement of Gas Volume Flow Rates in Small Pipes and Ducts

[Return to list of Attachments](#)

COPIES OF ALL WRITTEN AND ELECTRONIC STAKEHOLDER INPUT

From: Corky Martinkovic - AQDX
Sent: Thursday, June 04, 2015 1:22 PM
To: Johanna Kuspert - AQDX
Subject: FW: Rule 342

And it begins. Did you see the one about vehicle coatings as well?

Thanks,
Corky
(602) 506-6731

From: Rachel Danley - AQDX
Sent: Thursday, June 04, 2015 1:00 PM
To: Corky Martinkovic - AQDX
Subject: Rule 342

Hi Corky,

Dana Scaralata would like to talk to someone about Rule 342, wood furniture refinishing. He heard a rumor that “they” are lowering the VOC standards. He would just like to find out if this is true and what the new standard might be. He is a consultant who is familiar with the rules, so it should be a relatively short conversation.

If he doesn’t answer his desk phone, 828-261-0325 x1926, you can leave a message with the information. Otherwise, he can be reached on his cell phone, 818-406-7055, until 6:00 our time.

Thank you,

Rachel Danley
Administrative Operations Specialist
Maricopa County Air Quality Department
1001 North Central Avenue, Suite 125
Phoenix, Arizona 85004
Located at the Central Ave. & Roosevelt METRO stop
602-506-6201

CleanAirMakeMore.com

CLEAN AIR
MAKE
MORE



From: Cheri Dale - AQDX
Sent: Monday, June 08, 2015 12:46 PM
To: Johanna Kuspert - AQDX; Corky Martinkovic - AQDX
Subject: FW: Rule 342

FYI, my reply to Mr. Scarlata has been sent off, per your comments to leave Johanna as the point of contact at this stage of the rulemaking.

From: Cheri Dale - AQDX
Sent: Monday, June 08, 2015 12:45 PM
To: 'dscarlata@rpmwfg.com'
Subject: Rule 342

Dana,

I was happy to hear that your concern last week has been resolved.

With respect to future rulemaking, the Maricopa County Board of Supervisors has recently approved the revision of several County rules that control the emissions of volatile organic compounds (VOCs) and Nitrogen Oxides (NOx) that contribute to the formation of ground-level ozone. The revisions will serve to reduce the levels of these ozone precursors while also providing technology updates and clarification of rule elements.

If you are interested in these rule revisions please visit the County's Enhanced Regulatory Outreach Program (EROP) Website at <http://www.maricopa.gov/regulations/aa/process.aspx>. The EROP page will also post notices of future workshops – the first already scheduled for June 29 and 30, 2015. The workshop notices will contain first draft language for the rule revisions. Attending a workshop will also provide the opportunity to receive rule updates on a regular basis. For more information contact Johanna Kuspert at 602-506-6710 or JohannaKuspert@mail.maricopa.gov.

Cheri

Cheri Dale, MEPM, REHS/RS
Senior Planner
Maricopa County Air Quality Department
1001 N. Central Avenue, #125 | Phoenix, AZ 85004
Located at the Central Ave. & Roosevelt METRO stop
Desk 602.506.3476 | CleanAirMakeMore.com





Maricopa County
AIR QUALITY DEPARTMENT

COMMENT SHEET

NAME: KYLE CARTER DATE: 08/03/15
BUSINESS NAME: SHERWIN WILLIAMS
CONTACT PHONE OR ADDRESS: _____
E-MAIL ADDRESS: KYLE.CARTER@SHERWIN.COM

I support the proposed changes

I oppose the proposed changes Below are some suggestions to consider.

COMMENT:

THE PROPOSED VOC LIMITS WILL BE
COST PROHIBITIVE TO MOST OF OUR
CUSTOMERS.

HIRE CHRIS ANDREWS AS A
CONSULTANT.

For office use only
Case # _____

For further information, please visit:
<http://www.maricopa.gov/regulations/>
To submit comments, please visit:
42 <http://www.maricopa.gov/regulations/comments.aspx>

From: Kyle Carter <Kyle.Carter@sherwin.com>
Sent: Tuesday, August 04, 2015 6:35 PM
To: Cheri Dale - AQDX
Cc: Johanna Kuspert - AQDX; Corky Martinkovic - AQDX
Subject: Re: Maricopa County (AZ) Rule 342

Our regulatory department is reviewing the proposed changes. It will take some time but we will provide feedback. Thank you.

Kyle Carter
Sherwin-Williams
Technical Service Representative
602-376-5601
kyle.carter@sherwin.com

Sent from my iPhone

On Aug 4, 2015, at 4:22 PM, Cheri Dale - AQDX <CheriDale@mail.maricopa.gov> wrote:

Kyle,
Thank you for attending the Rule 342 Stakeholder workshop yesterday and your comments concerning the VOC limits being cost prohibitive to customers as well as the recommendation for the department to hire a consultant. If there is any information your company would like to provide concerning the product cost differences, it would be appreciated. If you have additional questions/comment/concerns, please let me know. Thanks again for your participation at the workshop. I look forward to working with you and your company during this rulemaking process.
Cheri

The Air Quality Department strives to provide excellent customer service to residents of Maricopa County.

How are we doing? [Send us your feedback.](#)

Cheri Dale, MEPM, REHS/RS
Senior Planner
Maricopa County Air Quality Department
1001 N. Central Avenue, #125 | Phoenix, AZ 85004
Located at the Central Ave. & Roosevelt METRO stop
Desk 602.506.3476



<image002.png>



<image004.png>

From: Scott Alderson <Scott.Alderson@sherwin.com>
Sent: Tuesday, August 04, 2015 4:54 PM
To: Cheri Dale - AQDX
Cc: Johanna Kuspert - AQDX
Subject: Re: 342 meeting

I did review the definitions, however I do not understand how the users are impacted. We will have more questions and provide some recommendations as we continue to discuss this.

Scott Alderson
Area Sales Manager
Product Finishes West Region
The Sherwin-Williams Company
Cell: [\(602\)550-6887](tel:(602)550-6887)
Fax: [\(602\)276-4601](tel:(602)276-4601)

On Aug 4, 2015, at 4:51 PM, Cheri Dale - AQDX <CheriDale@mail.maricopa.gov> wrote:

Scott,

Thank you for your question. The definition of high solids stains and low solids stains are in the current rule. In a quick word search, it appears that low solid stains is used just as a definition and in the definition of "stains" in the current rule. The use of the term "high solids" is used in an example in Appendix A.j in the example. The PROPOSED rule includes both high and low solids stains as a PROPOSED category for VOC limits. I will look into this further. Let me know if you have additional questions.

Cheri

From: Scott Alderson [<mailto:Scott.Alderson@sherwin.com>]
Sent: Tuesday, August 04, 2015 8:17 AM
To: Cheri Dale - AQDX
Subject: 342 meeting

Cheri, can you help me understand the need to define of a high solids and low solids stain.

Scott Alderson
Area Sales Manager
Product Finishes West Region
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Subject: 342 meeting

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Area Sales Manager
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The Sherwin-Williams Company
Cell: [\(602\)550-6887](tel:(602)550-6887)
Fax: [\(602\)276-4601](tel:(602)276-4601)

From: Schmon, Ewald <Ewald.Schmon@sata.com>
Sent: Monday, August 24, 2015 4:12 AM
To: Cheri Dale - AQDX
Cc: Vendor Technisource Inc; Johanna Kuspert - AQDX; khj@satausa.com; 'tl@satausa.com'; Maier, Norbert; Goettling, Jörg; Stoeber, Joern; Fuhrmann, Robert
Subject: Maricopa County (AZ) Rule 342 Spray Guns: Comments from SATA GmbH in Germany

Dear Chery,

First of all, we wish to thank you for sending us a copy of the preliminary draft of the revised Rule 342 „Coating Wood Furnitures and Fixtures“ of the Mariopa County Air Quality Dept. for our perusal.

After having carefully studied this draft, in the following we would like to send you our comments concerning the basic outline of the rule, and specifically concerning some of its basic definitions.

1. Conventional air-atomized spray guns (Section 208) and low-pressure spray guns (Section 219):

In our opinion, the definitions of what is to be considered a low-pressure (or true HVLP) spray gun and what a conventional spray gun should be in line with those being used in the Rule 1151 of the South Coast Air Quality Management District (SCAQMD). The reason for our suggestion simply lies in the fact that the definitions used in said Rule 1151 have set an established standard not only in all 50 states of the United States including your national EPA (6H Rule) but worldwide. So sticking to these definitions, which should be nowadays well known to any painter and any other person being involved in the coatings industry worldwide, we believe will help avoid misunderstandings and confusion.

2. Definition of HVLP:

Based on the Rule 1151, an HVLP spray gun is any spray gun which is designed to be operated with a dynamic internal air cap pressure in the center – as well as at the horns (!) – of maximum 10 psi, and which is permanently and clearly marked with “HVLP”. In addition, such an HVLP spray gun has also to carry a permanent marking indicating the maximum dynamic inlet pressure at which the maximum admissible dynamic internal air cap pressure of 10 psi will be reached, thus guaranteeing that the spray gun will be operated as a true HVLP spray gun.

As it is a common and well-established practice for many years (and also described in Rule 1151), any spray gun manufacturer offering HVLP spray guns has to make available test air caps allowing to measure the actually existing dynamic internal air cap pressure at the center as well as at the horn air orifices (see also your provisions in Section 502.2).

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Once again, we would like to thank you for having us given the opportunity to provide you with our input from a spray gun manufacturer's point of view already at this early stage of review and hope that these remarks will be seen as a valuable contribution to formulate the Rule 342.

In closing, we would like to kindly ask you to keep us further in the loop on any changes being made to this Rule 342. Thank you in advance for your co-operation.

Mit freundlichen Grüßen / Best regards / Meilleures salutations

i.V. Dr. Ewald Schmon,
R&D spray application and IP

i.V. Jörg Göttling
Head of export department

SATA GmbH & Co. KG

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Telefon: +49 7154 811 214

Telefax: +49 7154 811 193

E - mail : Ewald.Schmon@sata.com

Internet : www.sata.com

Von: Cheri Dale - AQDX [mailto:CheriDale@mail.maricopa.gov]

Gesendet: Dienstag, 18. August 2015 16:09

An: Stoever, Joern; Vendor Technisource Inc; 'tl@satausa.com'

Cc: Schmon, Ewald; Maier, Norbert; Goettling, Jörg; Johanna Kuspert - AQDX

Betreff: RE: Maricopa County (AZ) Rule 342 Spray Guns

Tony,

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Thank you, in advance, for your assistance throughout this rulemaking. I look forward to your suggestions and comments.

Cheri

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Cheri Dale, MEPM, REHS/RS

Senior Planner

Maricopa County Air Quality Department

1001 N. Central Avenue, #125 | Phoenix, AZ 85004

Located at the Central Ave. & Roosevelt METRO stop

Desk 602.506.3476



From: Stoever, Joern [<mailto:Joern.Stoever@sata.com>]

Sent: Tuesday, August 18, 2015 3:58 AM

To: Cheri Dale - AQDX

Cc: Schmon, Ewald; Maier, Norbert; Goettling, Jörg

Subject: WG: Maricopa County (AZ) Rule 342 Spray Guns

Dear Mrs. Dale,

we cannot open the link to the AQ-2015-006-Rule 342. Please send me the document by email. Do you already scheduled a date for the October hearing?

Mit freundlichen Grüßen / Best regards

i.A. Jörn Stöver

Verkaufsleiter Export / Export Sales Manager

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Internet: www.sata.com

From: Cheri Dale - AQDX [<mailto:CheriDale@mail.maricopa.gov>]
Sent: Thursday, August 13, 2015 10:28 AM
Cc: Johanna Kuspert - AQDX
Subject: Maricopa County (AZ) Rule 342 Spray Guns

Good Morning,

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SATA Verwaltungs-GmbH, Kornwestheim, HRB 202857
Geschäftsführer: Albrecht Kruse, Stuttgart

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From: Cheri Dale - AQDX
Sent: Monday, August 24, 2015 6:28 AM
To: Schmon, Ewald
Cc: Vendor Technisource Inc; Johanna Kuspert - AQDX; khj@satausa.com; 'tl@satausa.com'; Maier, Norbert; Goettling, Jörg; Stoever, Joern; Fuhrmann, Robert
Subject: RE: Maricopa County (AZ) Rule 342 Spray Guns: Comments from SATA GmbH in Germany

Dr. Schmon,

Thank for your detailed explanations of the spray gun terminology as well as your references to other agency rules. After reading your comments, it appears that I can word the spray gun requirements of the rule in a much simpler and clear manner. Your comments concerning the red and green tagging of spray guns are in line with the comments from the attendees at the first stakeholder meeting. I believe these requirements were put in place when the rule was originally adopted and offered an alternative method of identification. As you have stated in your comments, these rules are now well established so the additional tags appear to serve no purpose.

I will have the next draft ready towards the end of September and will make sure that you are included on the distribution list. I appreciate your time and detailed comments.

Regards,

Cheri

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Subject: Maricopa County (AZ) Rule 342 Spray Guns: Comments from SATA GmbH in Germany

Dear Chery,

First of all, we wish to thank you for sending us a copy of the preliminary draft of the revised Rule 342 „Coating Wood Furnitures and Fixtures“ of the Mariopa County Air Quality Dept. for our perusal.

After having carefully studied this draft, in the following we would like to send you our comments concerning the basic outline of the rule, and specifically concerning some of its basic definitions.

1. Conventional air-atomized spray guns (Section 208) and low-pressure spray guns (Section 219):

In our opinion, the definitions of what is to be considered a low-pressure (or true HVLP) spray gun and what a conventional spray gun should be in line with those being used in the Rule 1151 of the South Coast Air Quality Management District (SCAQMD). The reason for our suggestion simply lies in the fact that the definitions used in said Rule 1151 have set an established standard not only in all 50 states of the United States including your national EPA (6H Rule) but worldwide. So sticking to these definitions, which should be nowadays well known to any painter and any other person being involved in the coatings industry worldwide, we believe will help avoid misunderstandings and confusion.

2. Definition of HVLP:

Based on the Rule 1151, an HVLP spray gun is any spray gun which is designed to be operated with a dynamic internal air cap pressure in the center – as well as at the horns (!) – of maximum 10 psi, and which is permanently and clearly marked with “HVLP”. In addition, such an HVLP spray gun has also to carry a permanent marking indicating the maximum dynamic inlet pressure at which the maximum admissible dynamic internal air cap pressure of 10 psi will be reached, thus guaranteeing that the spray gun will be operated as a true HVLP spray gun.

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i.V. Jörg Göttling
Head of export department

SATA GmbH & Co. KG

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E - mail : Ewald.Schmon@sata.com
Internet : www.sata.com

Von: Cheri Dale - AQDX [mailto:CheriDale@mail.maricopa.gov]
Gesendet: Dienstag, 18. August 2015 16:09
An: Stoever, Joern; Vendor Technisource Inc; 'tl@satausa.com'
Cc: Schmon, Ewald; Maier, Norbert; Goettling, Jörg; Johanna Kuspert - AQDX
Betreff: RE: Maricopa County (AZ) Rule 342 Spray Guns

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E-Mail: joern.stoever@sata.com
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COUNTY MANAGER CASE APPROVAL

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Maricopa County
Air Quality Department

MEMORANDUM

Date: May 4, 2015
To: Tom Manos, County Manager
Via: Joy Rich, AICP, Deputy County Manager *JR*
From: Philip A. McNeely, R.G., Director *PAW*
Subject: AQ-2015-006-Rule 342 – County Manager's Approval

In accordance with the "Moratorium on Increased Regulatory Burdens", the Air Quality Department is seeking your approval to proceed with revisions to Rule 342 (Coating Wood Furniture And Fixtures). Rule 342 limits the emission of volatile organic compounds (VOCs) from the surface preparation and coating of wood furniture and fixtures. Revisions to Rule 342 are being proposed 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). Rule 342 revisions will include Reasonably Available Control Technology (RACT) for VOCs.

This rule revision qualifies for County Manager approval under the moratorium, as the rule revision will comply with a federal statutory or regulatory requirement or state statutory requirement. We are requesting your approval to move the rule revision, to be referenced as "AQ-2015-006-Rule 342," forward in accordance with the "Moratorium on Increased Regulatory Burdens".

Tom Manos

Approved by Tom Manos, County Manager