

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IX AIR DIVISION

Technical Support Document

For

EPA's Direct Final Rulemaking

For the

California State Implementation Plan

San Diego County Air Pollution Control District, Rule 66.1, Miscellaneous Surface
Coating Operations and Other Processes Emitting Volatile Organic Compounds

Prepared by: David Grounds and Adrienne Borgia

Reviewed by: Andrew Steckel

March, 2012

Agency: San Diego County Air Pollution Control District (SDCAPCD)

SIP Approved Rule: Rule 66 – Organic Solvents
Adopted – July 25, 1995
Submitted – October 18, 1996
EPA Approved – August 11, 1998 (63 FR 42724)

Subject of this TSD: Rule 66.1 – Miscellaneous Surface Coating Operations and Other Processes Emitting Volatile Organic Compounds
Adopted – February 24, 2010
Submitted – July 20, 2010

RULE SUMMARY – SDAPCD Rule 66.1, Miscellaneous Surface Coating Operations and Other Processes Emitting Volatile Organic Compounds (VOC), is a new rule designed to replace outdated Rule 66, Organic Solvents. Rule 66.1 is only applicable to miscellaneous coatings and other operations that emit VOCs which are not regulated by other District rules. SDCAPCD regulates an ozone nonattainment subpart 1 area for the 8-hour ozone national ambient air quality standard (NAAQS)¹ and SDCAPCD has designed Rule 66.1 partly to address the requirements for ozone non-attainment areas as described in Clean Air Act (CAA) section 182. Rule 66.1 serves to update the interpretation of photochemical reactivity and also to include limits that reflect the availability of low VOC emissions. Compliant cleaning solvents are widely available and many of them cost the same or less than conventional organic solvents. The majority of affected businesses are already using compliant cleaning materials.

Section (a) of Rule 66.1 indicates the applicability of the rule to all surface coating and solvent cleaning operations except those operations covered by a number of listed rules. The rule is stated to be applicable to those manufacturing, selling or supplying coating, coating component, solvent cleaning material or any other VOC-containing material used in an operation subject to this rule. Section (b) of Rule 66.1 identifies the basic requirement that all relevant surface coating operations be controlled by add-on air pollution control systems unless the VOC emissions are less than 5 tons per calendar year or the VOC content complies with the specified limits. This section of the rule lists exemptions for surface coating and cleaning /surface preparation operations including aerosol applications, those using equal to or less than 20 gallons of coating per consecutive 12-month period, those resulting in less than or equal to 150 lbs VOC emissions per consecutive 12-month period and several specialized usages, including

¹ 40 CFR 81

surface cleaning operations of gas turbine engines, research laboratory operations and digital printing operations.

Definitions of relevant and applicable terms are listed in section (c) of Rule 66.1. Section (d) itemizes controls with subsection (1) defining the requirements for surface coatings, including the 5 tons per calendar year requirement, control equipment or coating VOC limits of less than 420 grams/liter unbaked and 360 grams/liter baked, and subsection (2) defining the VOC limit for cleaning solvents as 50 grams/liter or 8 mm Hg at 20°C or less. Subsection (3) describes the requirements for application and cleaning of application equipment.

The air pollution control equipment required for surface coatings exceeding either the usage or VOC limits specified in section (d) (1) is generally defined in section (e). This includes submittal of a control plan including inspection schedules and maintenance plans. The required recordkeeping in section (f) basically comprises monthly usage records and the manufacturer and supplier information specified in section (g) indicates the required VOC content information necessary for the user's recordkeeping. Daily maintenance records of control equipment key components are also required.

Acceptable test methods for VOC content, other solvent content, calculations of total VOC vapor pressure, measurements of transfer efficiency and computation methods to determine capture efficiency and overall efficiency, are stipulated in section (h). Finally, a compliance schedule for new and existing operations is detailed in section (i).

BACKGROUND – On January 16, 2009 (74 FR 2936), EPA published a proposed rulemaking to address, among other issues, the United States Court of Appeals for the District of Columbia's Circuit's vacatur of the classifications system that EPA used to designate a subset of initial 1997 8-hour ozone nonattainment areas under title I, part D, subpart 1 of the CAA, including San Diego County. In that rulemaking, EPA proposed that all areas designated nonattainment for the 1997 8-hour ozone NAAQS under subpart 1, would be classified as subpart 2 areas (hereafter referred to as the "Subpart 1/Subpart 2 1997 8-Hour Ozone Rulemaking"). EPA has not yet completed its final rulemaking action for the Subpart 1/Subpart 2 1997 8-Hour Ozone Rulemaking.

The San Diego nonattainment area is among those areas that would be classified if EPA's proposal is finalized. San Diego was proposed as a moderate nonattainment area, which would have a 2010 attainment deadline. However, San Diego ozone air quality monitoring data do not show attainment with 2009-2010 data. Moderate and Serious nonattainment areas must submit reasonably available control technology (RACT) State Implementation Plans (SIPs). If the Subpart 1/Subpart 2 1997 8-Hour Ozone Rulemaking is finalized and San Diego continues to be in nonattainment for the 1997 8-hour ozone NAAQS, and if EPA classifies the area under subpart 2, EPA will set

a submittal deadline for the SIPs that need to be submitted to the EPA. This is required for the State of California to meet the requirements of the area's classification. As a result of not finalizing the Subpart 1/Subpart 2 1997 8-Hour Ozone Rulemaking, SDAPCD is not required to meet RACT, subpart 2, at this time.

EPA EVALUATION - The following criteria were used to evaluate the submitted rule.

1. **Enforceability** - The Bluebook (*Issues Relating to VOC Regulation Cutpoints, Deficiencies, and Deviations*, EPA, May 25, 1988) and the Little Bluebook (*Guidance Document for Correcting Common VOC & Other Rule Deficiencies*, EPA Region 9, August 21, 2001) were used to evaluate compliance with the CAA §110(a)(2)(A) requirement for enforceability.

The recordkeeping requirements of Rule 66.1 are more specific than those of the previous rule 66. The detailed information required from manufacturers and suppliers in section (g) is intended to provide sufficient information to support this recordkeeping. In addition, test methods have been updated to include the most current EPA methods as well as recent South Coast Air Quality Management District (SCAQMD) test methods and American Standard Testing Methods (ASTM) that have been approved by EPA. Finally, the compliance schedule assigns actual dates for compliance and for installing control equipment. These rule revisions all improve the enforceability of the rule.

2. **Stringency** - SDCAPCD Rule 66.1 regulates sources that are currently in an ozone nonattainment subpart 1 area and, as such, is not required to meet RACT requirements.

We have compared Rule 66.1 against previous Rule 66, analogous rules in other areas and relevant national guidance including EPA's Control Technique Guidelines (CTG) titled, Control of Volatile Organic Emissions from Existing Stationary Sources, Volume I: Control Methods for Surface Coating Operations (EPA-450/2-76-028, 11/76); Control of Volatile Organic Emissions from Solvent Metal Cleaning, (EPA-450/2-77-022, 11/77) and other state and local rules for this category.

Rule 66.1 is more stringent than previous Rule 66 which had 3,000 pounds per day limit for discharge of "organic materials to the atmosphere." Rule 66.1 has a 5 ton per calendar year limit as one of 3 control alternatives. The second alternative of Rule 66.1 for limiting VOCs is control equipment. Rule 66.1 requires an inspection schedule and an Operation and Maintenance Plan while the former Rule 66 required daily records of the same key parameters. This is discussed further below. Rule 66.1's third alternative for reducing VOC emissions is the use of coatings with no greater than 420 grams per liter (unbaked) and 360

grams per liter (baked) VOC content which is the same as Rule 66's limit. In addition, Rule 66 had no limit for cleaning solvents while Rule 66.1 proposes a 50 gram per liter or 8mm Hg at 20° C VOC limit for cleaning solvents. Finally, Rule 66.1 addresses manufacturers and suppliers as well as the operations to which Rule 66 was applicable.

SDAPCD Rule 66.1 is consistent with the CTG for Industrial Cleaning Solvent (EPA 453/R-06-001) recommended VOC limit for cleaning solvents of 50 grams per liter. We note, however, South Coast Rule 1171, Solvent Cleaning Operations, requires 25 gram per liter limit for cleaning solvents.

3. SIP Relaxation – The submitted rule generally has more stringent emission limits than the version that is currently SIP approved, thus strengthening the requirements of the SIP. Rule 66 appears more stringent with respect to the 40 pound/day limit for specific photochemically reactive chemicals, but this is not a concern because EPA considers photochemically reactive compounds with low or negligible photochemical reactivity to be exempt from regulation as a VOC. Therefore, we propose to determine that an approval of the submittal would comply with CAA sections 110(l) and 193 because (1) the proposed SIP revision would not interfere with the on-going process for ensuring that requirements for RFP and attainment of the NAAQS are met, and (2) the submitted SIP revisions are more stringent than the existing SIP requirements.

ADDITIONAL RECOMMENDATIONS FOR THE NEXT RULE REVISION –

The following revisions are not currently the basis for rule disapproval, but are recommended for the next time the rule is amended:

1. In subsection (a)(1), for please make the following revisions:
 - a. Rule 67.20.1 (not 67.20 as noted) is for Motor Vehicle and Mobile Equipment Refinishing Operations.
 - b. Please list the titles for Rules 61.1 through 61.8 as it is not entirely clear that these rules are all for vapor recovery as noted.
 - c. For clarity, please list the titles for Rules 61.1 through 69.4.1 as these rules seem to encompass more than combustion sources.
2. For completeness, please define the frequency of recording VOC emissions in subsection (b)(1)(iii).
3. The provisions described in subsection (b)(2)(iii) indicate that some of the rules listed in subsection (a)(1) as (rules) 68 through 69.4.1, rules regulating combustion sources, may not be totally exempt from this rule. These rules should be removed from section (a)(1), which gives full exemption, and retained in subsection (b)(2)(iii), with the provision that the total amount of cleaning materials used for those operations does not exceed 50 gallons per consecutive 12-month.
4. In Section (c), Definitions, please consider the following changes for clarification:

- a. Subsection (7), Electrical Components, add the following from subsection (8) to this definition: “Cabinets in which electrical components are housed are not considered electrical components.”
 - b. Subsection (23), define “Solvent” as a VOC –containing liquid used as a diluents, thinner, dissolver, reducer or cleaning agent. Consider deleting the definition in subsection (18), Organic Solvent.
5. Please consider lowering the cleaning material VOC limit in subsections (d)(2) and (d)(3)(ii)(A) to 25 grams per liter or less consistent, for example, with SCAQMD Rule 1171, Solvent Cleaning Operations.
 6. EPA has approved specific versions of SCAQMD and ASTM test methods, so please list those dates rather than “...as dated on February 24, 2010.”
Accordingly:
 - a. In subsection (h)(1)SCAQMD Test Method 304-91, should be dated February 1996.
 - b. In subsection (h)(2), SCAQMD Test Method 313-91 should be dated June 1993 and SCAQMD Test Method 308-91 should be dated February 1993.
 - c. In subsection (h)(5), SCAQMD “Spray Equipment Transfer Efficiency Test Procedures for Equipment Users” should be dated May 24,1989 and SCAQMD “Guidelines for Demonstrating Equivalency With District Approved Transfer Efficient Spray Guns” should be dated September 26, 2002 .
 - d. It is not necessary to stipulate a date for the EPA test method 204 in subsection (h)(7), but a reference to 40 CFR Part 51 Appendix M would be consistent with the other EPA test references in this section.

EPA ACTION – The rule largely fulfills the relevant CAA §110 and Part D requirements. EPA staff recommends approval of Rule 66.1 pursuant to CAA §110(k)(3) and §301(a).

ATTACHMENTS -

1. SDAPCD Rule 66.1, Miscellaneous Surface Coating Operations and Other Processes Emitting Volatile Organic Compounds, Adopted February 24, 2010.
2. SDAPCD Rule 66, Organic Solvents, Adopted July 1, 1972, Effective July 25, 1995

ADDITIONAL REFERENCES –

1. EPA’s Control Technique Guidelines (CTG) titled, “Industrial Cleaning Solvents” (EPA-453/R-06-004), September 2006
http://www.epa.gov/ttn/naags/ozone/ctg_act/200609_voc_epa453_r-06-001_ind_cleaning_solvents.pdf
2. “Issues Relating to VOC Regulation Cutpoints, Deficiencies, and Deviations,” (a.k.a., Bluebook), EPA OAQPS, May 25, 1988.
http://www.epa.gov/ttn/naags/ozone/ozonetech/voc_bluebook.pdf

3. "Guidance Document for Correcting Common VOC & Other Rule Deficiencies," (a.k.a., Little Bluebook), EPA Region 9, August 21, 2001.
<http://www.epa.gov/Region09/air/sips/littlebluebook2001.pdf>
4. Socioeconomic Impact Assessment
Proposed Rule 66.1
Miscellaneous Surface Coating Operations and Other Processes Emitting Volatile Organic Compounds, SDCAPCD, October 2009
5. Bay Area Air Quality Management District Regulation 8, Rule 4, General Solvent Surface Coating Operations.
<http://www.baaqmd.gov/~media/Files/Planning%20and%20Research/Rules%20and%20Regs/reg%2008/rg0804.ashx?la=en>
6. South Coast Air Quality Management District Rule 481, Spray Coating Operations, Amended January 11, 2002.
<http://www.aqmd.gov/rules/reg/reg04/r481.pdf>
7. South Coast Air Quality Management District Rule 1171, Solvent Cleaning Operations, Amended May 1, 2009.
<http://www.aqmd.gov/rules/reg/reg11/r1171.pdf>