

**AIR POLLUTION CONTROL DISTRICT
COUNTY OF SAN DIEGO**

**PROPOSED NEW RULE 66.1 – MISCELLANEOUS SURFACE
COATING OPERATIONS AND OTHER PROCESSES
EMITTING VOLATILE ORGANIC COMPOUNDS**

WORKSHOP REPORT

A workshop notice was mailed to all companies and government agencies in San Diego County that may be subject to proposed new Rule 66.1 – Miscellaneous Surface Coating Operations and Other Processes Emitting Volatile Organic Compounds. Notices were also mailed to all Economic Development Corporations and Chambers of Commerce in San Diego County, the U.S. Environmental Protection Agency (EPA), the California Air Resources Board (ARB), and other interested parties.

The workshop was held on May 6, 2009, and was attended by 17 people. Written comments were also received before and after the workshop. The workshop comments and District responses are as follows:

1. WORKSHOP COMMENT

Does Rule 66.1 apply to solvent cleaning of small parts in a container?

DISTRICT RESPONSE

No. Solvent cleaning of small parts or other objects conducted in a container is regulated by Rule 67.6.1 – Cold Solvent Cleaning and Stripping Operations. In contrast, Rule 66.1 applies to solvent cleaning as part of surface preparation or wipe cleaning operations which are conducted outside a container.

2. WORKSHOP COMMENT

The District should consider using the maximum incremental photochemical reactivity (MIR) of volatile organic compounds instead of the current VOC definition.

DISTRICT RESPONSE

The term “volatile organic compound (VOC)” as defined by EPA is codified in the Code of Federal Regulations 40 CFR 51.100 and applies across the country. While the MIR concept appeared in some ARB regulations for Consumer Products, it is technically challenging to develop and implement this concept. It was explicitly avoided in ARB's most recent Consumer Products rulemaking and it is not used in any state or local rules regulating VOC emissions at stationary sources. Therefore, at this time, the District will continue to use the current VOC definition.

3. WORKSHOP COMMENT

Will the District exempt other compounds that are not currently exempt by the EPA?

DISTRICT RESPONSE

No. Determining the photochemical reactivity of a compound is a complex process. EPA is responsible for evaluating the photochemical reactivity of volatile organic compounds and deciding on their exemption status. The District does not have the authority or the expertise to conduct such evaluations.

4. WORKSHOP COMMENT

What is the current definition of a VOC in Europe?

DISTRICT RESPONSE

The European Union defines a VOC, for rules regulating paints, as “an organic compound having an initial boiling point lower than or equal to 250°C (482°F) at atmospheric pressure.” A VOC, for solvent emissions, is defined as “an organic compound having a vapor pressure of 0.075 mmHg or more at 20°C.”

5. WORKSHOP COMMENT

Would artificial skin manufactured for prosthetic limbs be considered a medical device as defined in Rule 66.1?

DISTRICT RESPONSE

Yes, artificial skin manufactured for prosthetic limbs complies with the definition of a medical device because it can be qualified as “an implant that is intended to be used in the treatment of a disease.”

6. WORKSHOP COMMENT

Are dip tanks with a liquid surface area of less than one square foot subject to Rule 66.1?

DISTRICT RESPONSE

No, Rule 66.1 is not applicable to cleaning operations conducted in such dip tanks, as provided in Section (a) of the rule. These dip tanks are also exempt from Rule 67.6.1 and permitting requirements.

7. WORKSHOP COMMENT

Are there any anticipated changes to the exemption of small dip tanks in Rule 67.6.1?

DISTRICT RESPONSE

No, at this time, the District does not anticipate making any changes to Rule 67.6.1.

8. WORKSHOP COMMENT

Methyl ethyl ketone (MEK) is presently used to clean spraying equipment in thermal spraying operations. Last year, only 5 gallons of MEK were purchased. How does a facility maintain monthly records to qualify for the 20 gallon per year usage exemption in Subsection (b)(1)(ii)?

DISTRICT RESPONSE

As initially proposed, the 20-gallon exemption from the VOC limits of Subsection (d)(2) applies only to surface coatings but not to cleaning materials. However, in response to the comments received from a number of affected sources, the District revised the proposed rule. Subsection (b)(2) now provides exemptions for a stationary source using 20 gallons per consecutive 12-months or less of non-compliant cleaning materials or where VOC emissions from such materials do not exceed 150 lbs per consecutive 12-months.

9. WORKSHOP COMMENT

Does the rule consider acetone to be an exempt compound?

DISTRICT RESPONSE

Yes, acetone is a low-reactive volatile organic compound and is exempt by EPA and by the District according to the definition of exempt compounds in Rule 2.

10. WORKSHOP COMMENT

How does the use of acetone affect air quality in comparison to the use of a water-based cleaner in compliance with the VOC content limit specified in the rule?

DISTRICT RESPONSE

The concentration of VOCs in compliant water-based cleaners is very low, 50 g/l or less, so the use of even large volumes of such cleaners will result in a comparatively small amount of VOC emissions and consequently a small impact on air quality.

On the other hand, while acetone is an exempt compound, it does not have zero photochemical reactivity, as some other exempt compounds. This means that acetone reacts in the atmosphere to form ozone, albeit at a much slower rate than other solvents. In addition, acetone has a high volatility even at room temperature (its boiling point is 56°C or 133°F). Therefore, a careless use of relatively large volumes of acetone will result in its accumulation in the atmosphere and in subsequent smog formation. Facilities using acetone as a cleaning material should be aware of these facts.

11. WORKSHOP COMMENT

Is each process line considered to be a separate operation?

DISTRICT RESPONSE

Yes. The Rule 2 definition of a process line is essentially equivalent to the Rule 66.1 definition of an operation. Therefore, each process line is considered to be a separate operation.

12. WORKSHOP COMMENT

The surface cleaning of components used in laser optics should be exempt from Rule 66.1.

DISTRICT RESPONSE

The District agrees. The proposed rule has been revised as suggested because laser optics can be classified as precision optics.

13. WORKSHOP COMMENT

Does Rule 66.1 change any permit requirements?

DISTRICT RESPONSE

No, the rule itself does not affect any permit requirements.

14. WORKSHOP COMMENT

The rule should consider the use of biodegradable solvents with a low vapor pressure.

DISTRICT RESPONSE

Subsection (d)(2) specifies that any cleaning material with a total VOC vapor pressure of 8 mm Hg at 20°C or less can be used in operations subject to Rule 66.1.

15. WORKSHOP COMMENT

What resources are available to learn more about VOC emission control technologies?

DISTRICT RESPONSE

The EPA website (<http://www.epa.gov/ttnecat1/products.html>) has information on the latest VOC emission control technologies for various operations. The South Coast AQMD website (<http://www.aqmd.gov/rules/cas/prolist.html>) provides a list of manufacturers that make compliant cleaning materials for various applications.

16. WORKSHOP COMMENT

If a facility uses a solvent that complies with the VOC content limit of 50 g/l, what is the rationale for requiring monthly usage records?

DISTRICT RESPONSE

Monthly usage records are required in order for a facility or the District to estimate the amount of VOC emissions per a specified period of time (day, month or year) from all operations at a facility, as required by permit conditions or for emission inventory purposes. See also District response to Comment #18.

17. WORKSHOP COMMENT

Why are solvent cleaning operations excluded in Subsection (d)(1)? The language needs further clarification.

DISTRICT RESPONSE

The requirements for solvent cleaning operations are listed separately in Subsection (d)(2). A facility can use a cleaning material with a VOC content not higher than 50 g/l or with a total VOC vapor pressure of 8 mm Hg at 20°C or less.

Subsection (d)(1), in its entirety, only specifies the requirements for surface coating or other VOC emitting operations and excludes solvent cleaning operations. It has been revised to clarify this.

18. WORKSHOP COMMENT

The District should consider allowing facilities to use purchase records, for surface preparation and cleaning materials, in addition to or instead of actual usage records to demonstrate compliance with Rule 66.1.

DISTRICT RESPONSE

The District agrees. Language has been added to Subsection (f)(2)(ii) to allow the use of purchase records to satisfy the monthly recordkeeping requirements.

19. WORKSHOP COMMENT

The District should consider clarifying that those operations subject to the NOx emission control rules are not subject to Rule 66.1.

DISTRICT RESPONSE

The District agrees. Language has been added to Subsection (a)(1) as suggested.

20. WRITTEN COMMENT

Digital printing is not subject to District Rule 67.16 (Graphic Arts Operations) or other rules listed in Subsection (a)(1) of Rule 66.1. Therefore, the proposed changes to Rule 66.1 may be read as applying to digital printing. Rule 66.1 should identify digital printers and digital printing operations as exempt from its requirements.

DISTRICT RESPONSE

The District agrees that digital printing operations are not subject to Rule 66.1. Section (b) has been revised to add a specific exemption for digital printing operations.

21. WRITTEN COMMENT

The District should consider exempting surface preparation and surface cleaning operations for precision welding of stainless steel parts used in the manufacture of gas turbine engines. Specifications require surfaces to meet a high purity prior to welding on stainless steel turbomachinery parts in order to meet the stringent X-ray quality control requirements of national codes as well as international codes.

DISTRICT RESPONSE

The District agrees and has added an exemption to Subsection (b)(2) limiting the total amount of cleaning materials used for such operations.

22. WRITTEN COMMENT

The District should consider exempting surface preparation and surface cleaning of turbomachinery parts for thermal spraying operations. In this case, precision cleaning that does not leave any impurities is required in order to prevent the separation of the thermal spraying coating from the component.

DISTRICT RESPONSE

The District agrees and has added an exemption to Subsection (b)(2) limiting the total amount of cleaning materials used for such operations.

23. WRITTEN COMMENT

Subsection (d)(1)(iii) requires surface coating operations to use air-dried coatings with a VOC content not higher than 420 grams/liter (3.5 lbs/gal). It is hard to find coatings for plastic parts that comply with this VOC limit. Are there any other companies having a problem finding compliant coatings?

DISTRICT RESPONSE

The District is not aware of this problem. Other districts in California such as the South Coast and Bay Area air districts have for a long time had rules regulating plastic products coating operations. These rules have significantly lower VOC limits than those required by Rule 66.1. However, if a facility cannot find compliant coatings suitable for a particular coating operation, the proposed Rule 66.1 provides two alternatives for meeting the requirements of Section (d)(1). They are specified in Subsection (d)(1)(i) - Ensuring that the total VOC emissions from the operation subject to the rule are less than 5 tons per calendar year (excluding emissions from cleaning operations), and Subsection (d)(1)(ii) - Using add-on air pollution control equipment.

24. WRITTEN COMMENT

The District should remove the word “exclusively” from Subsection (b)(1)(i) to clarify that the use of all hand-held non-refillable aerosol spray containers is exempt from Rule 66.1.

DISTRICT RESPONSE

The District agrees. Subsection (b)(1)(i) has been revised.

25. WRITTEN COMMENT

Subsection (d)(2) should clarify that the vapor pressure limit applies to the “total VOC vapor pressure”.

DISTRICT RESPONSE

The District agrees. Subsection (d)(2) has been clarified as suggested.

26. WRITTEN COMMENT

Are surface preparation and solvent cleaning operations subject to both Subsections (d)(1) and (d)(2)? As the rule is currently written, Subsection (d)(1) applies to “any operation that may result in emissions of volatile organic compounds,” which includes solvent cleaning and surface preparation operations.

DISTRICT RESPONSE

No, surface preparation and solvent cleaning operations are not subject to both Subsections (d)(1) and (d)(2). The rule has been revised to clarify that these operations are only subject to Subsection (d)(2).

27. WRITTEN COMMENT

Are solvent wipe cleaning operations, currently exempt from permit requirements per Rule 11 Subsection (d)(16)(viii), considered new or existing operations?

DISTRICT RESPONSE

Solvent wipe cleaning operations that are exempt from permit requirements per Rule 11 before the date of proposed Rule 66.1 adoption are considered “existing operations”. Facilities conducting such operations will have one year from the date of adoption to comply with Rule 66.1. Subsection (c)(11), definition of “Existing Operation”, has been revised to clarify this. These facilities are exempt from permitting requirements but must comply with Rule 66.1.

28. WRITTEN COMMENT

The District should consider exempting solvent cleaning used in tile installation or repair in conjunction with passive countermeasure systems (PCMS). This work is conducted in accordance with Naval Sea Systems (NAVSEA) Standards. The NAVSEA Command Standards Item 009-78 and Repair Installation Method 05T1-99 Rev B require the metal surface to be lightly abraded and then wiped down with a 1:1 mixture of isopropyl alcohol and distilled water prior to the installation of the tiles.

DISTRICT RESPONSE

This exemption is not necessary. The installation or repair of PCMS tiles and all associated surface preparation and solvent cleaning operations are regulated by Rule 67.21 – Adhesive Material Application Operations. Rule 66.1 is not applicable to these operations as provided in Section (a) – Applicability.

29. WRITTEN COMMENT

The District should consider exempting wipe cleaning operations associated with aluminum welding onboard Navy vessels. NAVSEA quality assurance standards require the base metal to be wiped with acetone or denatured alcohol. The company written procedure does not allow the use of acetone onboard ships during welding operations because of safety concerns. Therefore, denatured alcohol must be used during this process.

DISTRICT RESPONSE

The District agrees and has added an exemption to Subsection (b)(2).

30. WRITTEN COMMENT

Tertiary-butyl acetate (TBAC) was excluded from the VOC definition by the EPA in 2004 and has since been exempt in 49 states and a growing number of California counties. The District should consider exempting TBAC from Rule 66.1 and add it to Table 1 in Rule 2 as a “Low Photochemically Reactive Organic Compound.”

DISTRICT RESPONSE

At this time, the District will not exclude TBAC from the VOC definition. While it is exempt by EPA, there is still an uncertainty about the toxicity of TBAC and its metabolite - tertiary butyl alcohol. The District does not have the expertise to address this problem and therefore prefers not to add TBAC to the list of exempt compounds until this uncertainty is resolved by the state agencies. Although some air districts have a limited exemption for TBAC, manufacturers are not likely to use TBAC in materials made just for the regions where it is exempt from the VOC definition.

31. WRITTEN COMMENT

The District should consider delaying the implementation date of new Rule 66.1.

DISTRICT RESPONSE

The District disagrees. The proposed rule is presently projected to be presented to the Air Pollution Control Board for adoption sometime in the beginning of 2010. The implementation

date for the affected facilities is one year after the date of adoption. Considering that the cleaning materials in compliance with the rule's new VOC limits are widely available and other rule emission standards remain essentially the same, there is no reason to delay the implementation date of the proposed rule.

32. WRITTEN COMMENT

The District should consider adding an exemption for operations involved in the manufacture of biotechnology pharmaceutical and bio-agricultural products that are exempt from the District's permit to operate requirements by Rule 11, Section (d).

DISTRICT RESPONSE

The District agrees and has added an exemption to Subsection (b)(1).

33. ARB COMMENT

There were no comments from the Air Resources Board.

34. EPA COMMENT

Subsection (h)(3) should include the full title and date of the referenced ASTM test method for calculating the total VOC vapor pressure of a cleaning material.

DISTRICT RESPONSE

The District agrees. Subsection (h)(3) has been revised as suggested.

35. EPA COMMENT

Section (h) should be clarified, specifying that in a case when multiple test methods are listed, a rule violation can be determined by any one of those test methods.

DISTRICT RESPONSE

The District agrees. Section (h) has been clarified as suggested.