AIR POLLUTION CONTROL DISTRICT

RULE 67.17 - STORAGE OF MATERIALS CONTAINING VOLATILE ORGANIC COMPOUNDS

WORKSHOP REPORT

A workshop notice was mailed to all permit holders in San Diego County. Notices were also mailed to all Chambers of Commerce in San Diego County, all Economic Development Corporations, the U.S. Environmental Protection Agency (EPA), the California Air Resources Board (ARB), and other interested parties.

The workshop was held on April 21, 1993, and was attended by 64 persons. Written comments were also received from ARB. The workshop comments and District responses are as follows:

WORKSHOP COMMENT:

Can the exemption in Subsection (b)(6) be extended to containers having maximum capacity of one quart? A quart container has only 25% higher surface area than a pint size container which is exempt in the proposed amended rule. At the same time it will be easier for industry to comply with this exemption.

DISTRICT RESPONSE:

San Diego County is a "severe" nonattainment area for both the federal and state ambient air quality standards for ozone, and VOC's are ozone precursors. Rule 67.17 is one of the least expensive and most cost effective strategies to reduce emissions of VOC's.

The rule currently applies to all containers, including thimble-sized and Dixie cup-sized containers. Requiring such small containers to be kept closed was not intended when the rule was originally adopted, and has caused implementation and enforcement problems in the field with no real corresponding emissions benefit. The addition of the exemption for pint-size and less containers more clearly reflects the original intent of the rule and provides some relief to industry from enforcement action. The change in actual emissions expected to result from this exemption should be minimal because of the relatively small size of containers that will be affected.

If the exemption was increased to a quart-size the District believes there would be a potentially significant increase in emissions of volatile organic compounds (VOC's) due to the significantly larger number of affected containers. Such an exemption would represent an unjustified relaxation of the rule and likely would not be approved by the state Air Resources Board or the Environmental Protection Agency for this reason.

In providing the one pint-size exemption, the District expects that all facilities will continue to make good faith efforts to keep volatile organic compounds in closed containers even if the container size is less than one pint. If the District finds that the one pint container exemption is being abused (e.g. numerous small containers left open in a work area), it will reevaluate whether it is appropriate to retain the one pint exemption.

WORKSHOP COMMENT:

The District needs to define more precisely the term "ambient temperature". It is not clear if this means 68°F, or any room temperature.

DISTRICT RESPONSE:

The District agrees. Subsections (b)(3) and (b)(6) have been revised to specify a temperature not higher than 49°C (120°F).

WORKSHOP COMMENTS:

Do plunger cans and dispensers with press down caps represent closed containers? Sometimes there is a small amount of liquid left in the upper pan of a plunger can after the liquid is drained back into the container.

DISTRICT RESPONSE:

Yes. Dispensing plunger cans and dispensers with press down caps will be considered closed containers. The rule has been revised to reflect this.

WORKSHOP COMMENT:

Does transferring a solvent from larger cans such as gallon-size cans to smaller containers represent a container being used or accessed?

DISTRICT RESPONSE:

Yes, such operation complies with the definition of a container "in use", specified in Subsection (c)(2)(B) as "being filled or emptied". The operation described can be classified as filling the small container or as emptying the large one.

WORKSHOP COMMENT:

There is a widespread practice to make a pinhole in plastic containers holding a low boiling solvent to relieve the pressure, so the container would not overflow. Does such a pinhole represent a visible hole, specified in Subsection (c)(3)(B)? Would such container be considered open?

DISTRICT RESPONSE:

No. Such a container will be considered closed. This will be clarified in a written policy memo to District staff.

WORKSHOP COMMENT:

The District is developing Rule 67.19 for paint manufacturing operations. Can Rule 67.17 specify that operations subject to Rule 67.19 are exempt from Rule 67.17?

DISTRICT RESPONSE:

Since Rule 67.19 has yet not been adopted, it cannot be referenced in Rule 67.17. However, the proposed Rule 67.19 specifies that all operations subject to it are exempt from Rule 67.17, if stored at temperatures at or below 120°F. This will address this concern.

WORKSHOP COMMENT:

The definition of a container in Rule 67.17 does not include drip pans or reservoirs for collecting cutting and lubricating oils in machining equipment. Does this mean that drip pans and reservoirs for collecting oils are exempt from the rule?

DISTRICT RESPONSE:

Yes. These pans and reservoirs are exempt from the rule, since they are not considered containers under the rule's definition.

WORKSHOP COMMENT:

Are cutting and lubricating oils exempt on the grounds of their high boiling point?

DISTRICT RESPONSE:

Cutting and lubricating oils having a boiling point higher than 204°C (400°F) are exempt from the rule if stored at temperatures at or below 120°F. In addition, drip pans and reservoirs for collecting oils in machining shops are not containers by the definition, and therefore are not subject to Rule 67.17.

WORKSHOP COMMENT:

Does the rule provide an exemption for laboratories in educational institutions such as community colleges?

DISTRICT RESPONSE:

No. The rule applies to all facilities which store, transfer or otherwise use materials containing volatile organic compounds.

WORKSHOP COMMENT:

Some cutting oils contain 1,1,1-trichloroethane. Are they still exempt from the rule?

DISTRICT RESPONSE:

Yes. 1,1,1-trichloroethane is not a VOC because it does not take part in photochemical reactions leading to smog formation. Therefore, it is exempt from Rule 67.17.

WORKSHOP COMMENTS:

Can the rule specify the size of exempt containers in metric units, such as milliliters? Solvents are sold very often in 500 ml containers. Can 500 ml containers be exempt from the rule?

DISTRICT RESPONSE:

The rule has been revised to provide the metric equivalent to a pint size container (473 ml) which is exempt from the rule requirements. 500 ml containers are subject to the rule and must be covered when not in use.

WORKSHOP COMMENT:

Does a dispensing operation comply with the definition "in use"?

DISTRICT RESPONSE:

Yes, it does.

WORKSHOP COMMENT:

Does Rule 67.17 apply to degreasing operations?

DISTRICT RESPONSE:

No, it does not. Degreasing operations are regulated by Rule 67.6. Equipment subject to Rule 67.6 is specifically exempt from Rule 67.17 by Subsection (b)(1).

WORKSHOP COMMENT;

The definition of volatile organic compounds should exclude any low volatility compounds. Emissions from such compounds are negligible.

DISTRICT RESPONSE:

The VOC definition in Rule 67.17 is mandated by EPA policy. It is based on the fact that any organic compound (except non-photochemically reactive hydrocarbons, which are specifically exempt) may take part in smog formation if it is exposed to certain conditions, such as high temperature. Therefore, there is no exemption in the general VOC definition based on vapor pressure or boiling point of an organic compound. However, low volatility materials can be exempt from individual rules. Therefore, Rule 67.17 exempts materials containing VOC with an initial boiling point higher than 204°C (400°F) provided that they are stored at a temperature not higher than 49°C (120°F).

WORKSHOP COMMENT:

Is Rule 67.17 applicable to molds used in casting operations? Such molds are open during the casting process.

DISTRICT RESPONSE:

No. Rule 67.17 applies only to the storage of materials containing volatile organic compounds, not to materials being processed.

WORKSHOP COMMENT:

Does Rule 67.17 apply to paint trays and/or rollers left open while painters are out -for-lunch or away from the job site?

DISTRICT RESPONSE:

Paint trays containing water-based paints are generally exempt from the rule (Subsection (b)(5)) since these materials typically contain less than 10% of VOC's. Paint trays with solvent-based paints, if their size is larger than one pint, must be covered when not in use, as required by the rule. Rollers are not containers and therefore are not subject to Rule 67.17.

WORKSHOP COMMENT:

There is a requirement that 55 gallon containers with paints or solvents be kept inside another metal container. Does APCD require this?

DISTRICT RESPONSE:

No. Rule 67.17 requires only that either of the two containers be closed when not in use. Fire regulations may require special enclosures for flammable substances.

WORKSHOP COMMENT:

What is the acceptable precision in the determination of the VOC content of materials?

DISTRICT RESPONSE:

EPA Test Method 24 specifies the acceptable precision in determining the VOC content of coatings and other VOC containing materials in a laboratory as not more than ±3%, and between different laboratories as not more than ±7.5%.

WORKSHOP COMMENT:

Does Rule 67.17 apply to containers which have been emptied and prepared for disposal?

DISTRICT RESPONSE:

No. Subsection (d)(2) requires containers storing VOC's to be closed, except when they are empty. The rule also provides the definition of an "empty container" in Subsection (c)(5).

WORKSHOP COMMENT:

If a facility has documentation on the composition of liquid being stored, and the documentation contains calculations showing that the VOC content of liquid is less than 10%, would such documentation be sufficient? Would the facility need to conduct the test specified in the rule?

DISTRICT RESPONSE:

Yes, technical documentation proving that the material contains less than 10% of VOC is sufficient. No, a test will not be required. However, the District may elect to have a sample of material analyzed to verify the documentation results.

WORKSHOP COMMENT:

Some facilities have solvent recovery equipment which needs to be cleaned from time to time. The cleaning process may be interrupted and a person doing this may step out for a while. Would this equipment be considered an open container?

DISTRICT RESPONSE:

If the equipment is being cleaned, i.e. complies with the definition "in use" which includes "being cleaned", then this equipment does not need to be covered. However, if a person cleaning the equipment left it filled with a solvent and open for a significant period of time, this will

be considered a violation of Rule 67.17. A significant amount of time will be considered to be the duration of the inspection. This will be clarified in a written policy memo to District staff.

WORKSHOP COMMENT:

Where can one find information on the VOC content of a material if such information is not available on site?

DISTRICT RESPONSE:

The information on the composition of the material can be obtained from the manufacturer of this material. Often it appears on the Material Safety Data Sheet for the product. If this is not available, the District will try to assist in obtaining the necessary data from manufacturers or suppliers, or by laboratory analysis.

WORKSHOP COMMENT:

Does Rule 67.17 apply to the storage of refrigerants?

DISTRICT RESPONSE:

No, it does not. Presently, most refrigerants are chlorofluorocarbons which are not volatile organic compounds. They are specifically exempted by Subsections (c)(1) and (c)(6) of the rule. Refrigerant storage and release to the atmosphere may be regulated by other laws.

PRE-WORKSHOP COMMENT:

There are some instances in printing industry operations where people take a small amount of ink out of a large container, and use it, and take a small amount again while the container remains open. They do it almost continuously, or within one minute of time. Do they still need to cover the large container, or can they keep it open until the whole operation is over?

DISTRICT RESPONSE:

Containers larger than one pint can be open while a person conducts a continuing operation provided that the operator remains in the work area, the main operation continues while the container is open, and the container is being regularly accessed (typically, at least every five minutes). This will be clarified in a written policy memo to District staff.

However, to minimize VOC emissions the District recommends that, whenever possible, operators use dispensers with press down caps or dispensing plunger containers, instead of conventional containers.

ARB COMMENT:

Rule 67.17 exempts four broad classes of perfluorocarbons from the VOC definition. The ARB is not aware of any standard test methods which are designed to identify and measure the concentration of these compounds. It is suggested that a special wording be added to the rule to require manufacturers to identify which specific individual exempt compound is used in formulating their product and provide a test method for its determination.

DISTRICT RESPONSE:

The District agrees. The rule has been revised to include this provision.

ARB COMMENT:

There is no requirement for how long records pertaining to Subsections (b)(3), (b)(4), (b)(5) and (b)(6) must be kept. The District should require operators to keep these records for at least two years.

DISTRICT RESPONSE:

Records relating to exemptions in Section (b) are either manufacturers' specifications or analyses for VOC containing materials. These records must be kept on site as long as a corresponding material is used. The rule has been revised to reflect this intent.

ARB COMMENT:

Section (b) exempts certain low volatility materials provided that they "are stored at not higher than ambient temperature". This section should be clarified by providing a definition of "ambient temperature" or specifying a maximum storage temperature such as 120° F.

DISTRICT RESPONSE:

The District agrees. The rule has been revised to specify a maximum storage temperature of 120° F.

EPA COMMENTS:

No comments were received from EPA.

RJSm:NZ:jo
05/12/93

AIR POLLUTION CONTROL DISTRICT

PROPOSED AMENDMENTS TO RULE 67.17

Proposed amendments to Rule 67.17 are to read as follows:

RULE 67.17. STORAGE OF MATERIALS CONTAINING VOLATILE ORGANIC COMPOUNDS

(a) **APPLICABILITY**

This rule applies to any person who stores, transfers, applies or otherwise uses materials which contain volatile organic compounds.

(b) **EXEMPTIONS**

(1) This rule is not applicable to equipment subject to District Rules 61.1, 61.2, 61.3, 61.4, 67.2, 67.6, 67.8, 67.10 and 67.15.

(2) This rule is not applicable to any containers utilized exclusively in connection with any structure, which is designed and used exclusively as a dwelling for not more than four families.

(3) Section (d) of this rule is not applicable to any asphaltic material which contains volatile organic compounds and which, if distilled, has a volume percent evaporated at 360°C (680°F) of 20% or less, provided such material is stored at ~~not higher than ambient temperatures~~ a temperature not higher than 49°C (120°F).

(4) Section (d) of this rule is not applicable to any material which contains volatile organic compounds and which has an initial boiling point of 204°C (400°F) or more ~~at atmospheric pressure~~, provided that such material is stored at ~~not higher than ambient~~ a temperature not higher than 49°C (120°F). ~~This exemption shall not apply to any of the following: paints, thinners (diluents, viscosity reducers, retarders and dispersants), catalysts, any other paint additive, sealers, body fillers, resins, gel coats, inks, glues, adhesives, cleanup solvents or any of and their wastes.~~

(5) Section (d) of this rule is not applicable to any aqueous material which contains less than 10 percent by weight of volatile organic compounds.

(6) Section (d) of this rule is not applicable to any material containing volatile organic compounds with an initial boiling point of 60°C (140°F) or higher, stored in a container having a maximum capacity of one pint (473 ml) or less, provided that the material is stored at ~~not higher than ambient~~ a temperature not higher than 49°C (120°F).

It is the responsibility of any person claiming exemptions (b)(3), (b)(4), ~~and/or~~ (b)(5) and/or (b)(6) to maintain current manufacturers' specifications or analyses which substantiate this claim. For materials currently in use, ~~The~~ the claimant shall keep ~~make~~ these records on site and make them available to the Air Pollution Control District upon request.

(c) **DEFINITIONS**

For the purposes of this rule, the following definitions shall apply:

(1) **"Volatile Organic Compound (VOC)"** means any volatile compound containing at least one atom of carbon, except: methane, carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates, ammonium carbonate, and exempt compounds: ~~chloride, 1,1,1-trichloroethane, trichlorofluoromethane (CFC-11), dichlorodifluoromethane (CFC-12), chlorodifluoromethane (HCFC-22), trifluoromethane (CFC-23), trichlorotrifluoroethane (CFC-113), dichlorotetrafluoroethane (CFC-114), and chloropentafluoroethane (CFC-115), dichlorotrifluoroethane (HCFC-123), dichlorofluoroethane (HCFC-141b), tetrafluoroethane(HFC-134a), and chlorodifluoroethane (HCFC-142b)~~ which may be emitted to the atmosphere during the storage or use of the compound or of any materials containing the compound.

(2) **"In Use"** means:

(A) being accessed, or

(B) being filled or emptied, or

(C) being cleaned, maintained or repaired.

(3) **"Closed"** means:

(A) having in place an apparatus or cover which completely covers the container and which is designed to retard VOC emissions but not necessarily provide a vapor tight seal, and

(B) having no visible holes, breaks, openings or separations between adjoining components of the container or container cover. Plastic squeeze bottles, wash bottles, spray bottles, dispensing plunger cans, and dispensers with press down caps and/or with narrow tips constitute closed containers.

(4) **"Container"** means a receptacle used for storing materials containing volatile organic compounds included but not limited to cans, drums, pails, bottles or jars. This definition does not include drip pans or reservoirs used for collecting cutting and lubricating oils in machining equipment.

~~(4)~~(5) **"Empty"** means containing no materials which can be further drained or removed by gravity.

(6) **"Exempt Compound"** means any of the following compounds or classes of compounds: methylene chloride, 1,1,1-trichloroethane, trichlorofluoromethane (CFC -11),

dichlorodifluoromethane (CFC-12), chlorodifluoromethane (HCFC-22), trifluoromethane (HFC-23), trichlorotrifluoroethane (CFC-113), dichlorotetrafluoroethane (CFC-114), chloropentafluoroethane (CFC-115), dichlorotrifluoroethane (HCFC-123), tetrafluoroethane (HFC-134a), dichlorofluoroethane (HCFC-141b), chlorodifluoroethane (HCFC-142b), 2-chloro-1,1,1,2-tetrafluoroethane (HCFC-124), pentafluoroethane (HFC-125), 1,1,2,2 -tetrafluoroethane (HFC-134), 1,1,1-trifluoroethane (HFC-143a), 1,1-difluoroethane (HFC-152a); and the following four classes of perfluorocarbon (PFC) compounds:

(i) cyclic, branched, or linear, completely fluorinated alkanes;

(ii) cyclic, branched, or linear, completely fluorinated ethers with no unsaturations;

(iii) cyclic, branched, or linear, completely fluorinated tertiary amines with no unsaturations; and

(iv) sulfur containing perfluorocarbons with no unsaturations and with sulfur bonds only to carbon and fluorine.

~~(5)~~(7) **"Waste"** means a material which is intended to be discarded, is marked for disposal, or is no longer usable.

~~(6) **"Container" means a receptacle used for storing volatile organic compounds included but not limited to cans, drums, pails, bottles or jars. This definition does not include drip pans or reservoirs used for collecting cutting and lubricating oils in machining equipment.**~~

(d) **STANDARDS**

~~On and after March 6, 1990, any~~ Any person subject to this rule shall comply with the following:

(1) All containers used to store, transfer, apply or otherwise employ materials containing VOC shall be closed when not in use.

(2) All containers used to store or transfer wastes containing VOC shall be closed except when being accessed or when empty.

(3) Containers specified above may be equipped with vents provided such vents are necessary to comply with applicable fire and safety codes.

(4) All wastes containing VOC (including paper or cloth impregnated with VOC) shall be stored in closed containers.

(e) **VOC TEST METHODS**

(1) The VOC content of materials exempt pursuant to Subsection (b)(3) of this rule shall be determined in accordance with the ~~most recent revisions of~~ ASTM Standard Test Method for Distillation of Cut-back Asphaltic (Bituminous) Products, D402-76.

(2) The initial boiling point of materials exempt pursuant to Subsections (b)(4) and (b)(6) of this rule shall be determined in accordance with the ASTM Test Method 1078-86 for Distillation Range of Volatile Organic Liquids.

(3) The VOC content of materials exempt pursuant to Subsection (b)(5) of this rule shall be determined in accordance with the EPA Test Method 24 (40 CFR 60, Appendix A) as it exists on (date of adoption). ~~ASTM Standard Recommended Practice for General Gas Chromatography Procedures, E 260-85.~~

(4) Perfluorocarbon (PFC) compounds shall be assumed to be absent from a material subject to this rule unless a manufacturer of the material or a facility operator identifies to the satisfaction of the Air Pollution Control Officer that the specific individual compound(s) and the amount(s) are present in the material and provides an appropriate test method which can be used to quantify the specific compounds.