



#### **Air Pollution Control Board**

Greg Cox	District 1
Dianne Jacob	District 2
Pam Slater	District 3
Ron Roberts	District 4
Bill Horn	District 5

#### **Air Pollution Control Officer**

R. J. Sommerville

**DATE:** March 7, 1995

**TO:** Air Pollution Control Board

**SUBJECT:** Adoption of Amendments to Rule 67.19 - Coatings and Printing Inks Manufacturing Operations, Rule 67.22 - Expandable Polystyrene Foam Products Manufacturing Operations, and Rule 67.24 - Bakery Ovens.

#### **SUMMARY:**

Rules 67.19, 67.22 and 67.24 were adopted in June 1994 to implement reasonably available control technology (RACT) requirements of the Federal Clean Air Act for major sources of volatile organic compounds (VOCs), which are ozone precursors. The rules require facilities emitting 25 or more tons per year of VOCs to install add-on control equipment or provide process modifications reflecting federal RACT requirements. When the rules were adopted, San Diego County was a Severe ozone nonattainment area and as such, RACT rules were required by the Federal Clean Air Act for sources emitting 25 or more tons per year of VOCs (major sources).

In January 1995, Environmental Protection Agency reclassified San Diego County from a Severe to a Serious ozone non-attainment area. This action raised the threshold at which a source is considered major and subject to federal RACT requirements from 25 to 50 tons per year of VOCs. Accordingly, the proposed amendments will increase the emissions threshold at which federal RACT requirements must be satisfied to 50 or more tons per year of VOCs. In addition, the emissions testing requirement currently in Rule 67.24 is being deleted because calculations show that VOC emissions from affected bakeries are below 50 tons per year.

The proposed amendments will affect one paint manufacturing facility subject to Rule 67.19, one polystyrene foam products manufacturing facility subject to Rule 67.22 and two bakeries subject to Rule 67.24. They will not result in any emissions changes.

The proposed amendments are consistent with the Board's direction of February 2, 1993, regarding implementation of new or revised rules because they reflect the less stringent requirements associated with San Diego County's reclassification from Severe to Serious.

#### **Issue**

Should the Board adopt amendments to Rule 67.19 - Coatings and Printing Inks Manufacturing Operations, Rule 67.22 - Expandable Polystyrene Foam Products Manufacturing Operations, and Rule 67.24 - Bakery Ovens to reflect the revised ozone non-attainment status of San Diego County?

**SUBJECT: Adoption of Amendments to Rule 67.19 - Coatings and Printing Inks  
Manufacturing Operations, Rule 67.22 - Expandable Polystyrene Foam Products  
Manufacturing Operations, and Rule 67.24 - Bakery Ovens.**

## **Recommendation**

### **AIR POLLUTION CONTROL OFFICER**

Adopt the resolution amending Rules 67.19, 67.22 and 67.24 and make appropriate findings:

- (1) of necessity, authority, clarity, consistency, non-duplication and reference as required by Section 40727 of the State Health and Safety Code.
- (2) that the amendments will alleviate a problem and promote attainment of ambient air quality standards (Section 40001 of the State Health and Safety Code);
- (3) that the amendments will not significantly affect air quality or emissions limitations, and that an assessment of socioeconomic impacts is not required (Section 40728.5 of the State Health and Safety Code); and
- (4) that there is no reasonable possibility that the amended rules may have a significant effect on the environment, and that adoption of amended Rules 67.19, 67.22 and 67.24 is exempt from the provisions of the California Environmental Quality Act pursuant to California Code of Regulations, Title 14, Section 15061.

## **Advisory Statement**

The Air Pollution Control District Advisory Committee recommended adopting proposed amended Rules 67.19, 67.22 and 67.24 at its February 8, 1995 meeting.

## **Fiscal Impact**

Adopting the proposed amendments will have no fiscal impact on the District.

## **Alternatives**

Not adopt amendments to Rule 67.19, 67.22 and 67.24. This would result in the rules being more stringent than is required under minimum state and federal requirements. This would be inconsistent with the Board's direction of December 2, 1993 that no new or revised regulation be implemented unless specifically required by federal or state law. Accordingly, this alternative is not recommended.

## **BACKGROUND:**

The federal Clean Air Act requires all major sources of volatile organic compounds (VOCs) to meet reasonably available control technology (RACT) emission reduction requirements. In January 1993, the Environmental Protection Agency (EPA) notified the District that failure to submit rules requiring the RACT level emission reductions on all major sources by July 15, 1994, would result in imposition of federal sanctions being imposed on San Diego County including a 2 to 1 emission offset ratio for new and modified businesses and withholding up to \$75 million in federal transportation funds.

**SUBJECT: Adoption of Amendments to Rule 67.19 - Coatings and Printing Inks  
Manufacturing Operations, Rule 67.22 - Expandable Polystyrene Foam Products  
Manufacturing Operations, and Rule 67.24 - Bakery Ovens.**

On June 7, 1994, the Board adopted three new rules, 67.19, 67.22 and 67.24, controlling VOC emissions from paints and printing inks manufacturing, polystyrene foam products manufacturing and bakery ovens, respectively. They reflect severe area requirements, specifically, facilities emitting 25 or more tons per year of VOCs to install add-on control equipment or provide process modifications reflecting the federal RACT (or alternative RACT) requirements. In addition, Rule 67.24 requires that bakeries perform emissions testing if their estimated emissions exceed 80% of the major source emission threshold.

On January 19, 1995 EPA reclassified San Diego County's ozone non-attainment status from Severe to Serious. This increased the major VOC source emission threshold from 25 to 50 tons per year. Accordingly, the proposed amendments will raise the applicability threshold for the RACT requirements from 25 to 50 tons of VOC emissions per year. In addition, the expensive and time consuming emission testing requirement will be deleted from Rule 67.24 because the District's calculations show that the two largest bakeries in the county (previously subject to RACT requirements) emit less than 50 tons of VOCs per year.

The proposed changes will affect one paint manufacturing facility, one expandable polystyrene foam products manufacturing facility and two bakeries. These facilities are not major sources under the revised ozone non-attainment status and therefore are no longer subject to federal RACT requirements. The proposed amendments will not result in any emission changes because the current rules did not require implementing RACT level emission controls before June 1995.

Section 40728.5 of the State Health and Safety Code requires the District to perform a socioeconomic impact assessment for new and revised rules and regulations significantly affecting air quality or emission limitations. The amendments to Rules 67.19, 67.22 and 67.24 will not result in any significant changes in air quality or emission limitations. Therefore, a socioeconomic impact assessment is not required.

On February 2, 1993, the Air Pollution Control Board directed that, with the exception of a regulation requested by business or a regulation for which a socioeconomic impact assessment is not required, no new or revised regulation shall be implemented unless specifically required by federal or state law. Amending Rules 67.19, 67.22 and 67.24 removes requirements more stringent than current federal Clean Air Act mandates and is consistent with the Board's February 2, 1993 direction.

### **California Environmental Quality Act**

The California Environmental Quality Act requires an environmental review for certain actions. The proposed amendments to Rules 67.19, 67.22 and 67.24 would increase the applicability limit for RACT control requirements from 25 to 50 tons per year pursuant to the EPA reclassification of San Diego County to a Serious ozone non-attainment area. However, this change will not increase the current level of VOC emissions in the county because the RACT control requirements of the existing rules are not effective until June 1995. In addition, no new emission sources subject to Rules 67.19, 67.22 and 67.24 have been constructed since these rules were adopted. Therefore, adopting the proposed amendments to Rules 67.19, 67.22 and 67.24 has no possibility of causing a significant effect on the environment and is exempt from the provisions of the California Environmental Quality Act pursuant to California Code of Regulations, Title 14, Section 15061.

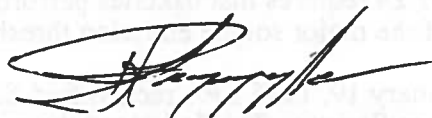
**SUBJECT: Adoption of Amendments to Rule 67.19 - Coatings and Printing Inks  
Manufacturing Operations, Rule 67.22 - Expandable Polystyrene Foam Products  
Manufacturing Operations, and Rule 67.24 - Bakery Ovens.**

A public workshop on proposed Rules 67.19, 67.22 and 67.24 was held on December 15, 1994. The workshop report is attached.

Concurrence:

Respectfully submitted,

DAVID E. JANSSEN  
Chief Administrative Officer



R. J. SOMMERVILLE  
Air Pollution Control Officer

**SUBJECT:** Adoption of Amendments to Rule 67.19 - Coatings and Printing Inks  
Manufacturing Operations, Rule 67.22 - Expandable Polystyrene Foam Product  
Manufacturing Operations, and Rule 67.24 - Bakery Ovens.

**COUNTY COUNSEL APPROVAL:** Form and Legality ☒ Yes ☐ N/A  
☐ Standard Form ☐ Ordinance ☒ Resolution

**CONTRACT REVIEW PANEL:**    ☐ Approved \_\_\_\_\_    ☒ N/A

**PREVIOUS RELEVANT BOARD ACTION:** June 7, 1994, APCD #1

**CITIZEN COMMITTEE STATEMENT:** The Air Pollution Control District Advisory Committee recommended adoption of proposed Rules 67.19, 67.22 and 67.24 at its February 8, 1995 meeting.

**ORIGINATING DEPARTMENT:** Air Pollution Control District

**CONTACT PERSON:** Richard J. Smith, Deputy Director      750-3303      MS: 0-176

DEPARTMENT AUTHORIZED REPRESENTATIVE

MARCH 7, 1995  
MEETING DATE

FINDINGS OF THE SAN DIEGO COUNTY AIR POLLUTION  
CONTROL BOARD IN RESPECT TO ADOPTION OF  
AMENDMENTS TO RULES 67.19, 67.22 AND 67.24

- A. Pursuant to section 40727 of the Health and Safety Code, the Air Pollution Control Board of the San Diego County Air Pollution Control District makes the following findings:
1. (Necessity) The adoption of the proposed amendments to District Rules 67.19, 67.22 and 67.24 is necessary for the District to raise the threshold for application of federal reasonably available control technology requirements to 50 or more tons per year of volatile organic compounds, and to remove the emissions testing requirement in Rule 67.24, to reflect the District's reclassification as a Serious ozone nonattainment area.
  2. (Authority) The adoption of the proposed amendments is authorized by Health and Safety Code sections 40001 and 40702.
  3. (Clarity) The proposed amendments are written so that their meaning can be easily understood by persons directly affected by the rule.
  4. (Consistency) The proposed amendments are in harmony with, and not in conflict with or contrary to, existing statutes, court decisions, and State law and Federal regulations.
  5. (Nonduplication) The proposed amendments do not impose the same requirements as an existing state or federal regulation.
  6. (Reference) The adoption of the proposed amendments implements section 182(a)(1)(A) of the federal Clean Air Act [42 U.S.C. section 7511a(a)(1)(A)].
- B. The Air Pollution Control Board further finds that adoption of the proposed amendments will not significantly affect air quality or emissions limitations, and therefore an assessment of socioeconomic impacts of the proposed amendments was not required by Health and Safety Code section 40728.5.
- C. The Air Pollution Control Board further finds that there is no reasonable possibility that the proposed amendments may have a significant effect on the environment, and that the adoption of the proposed amendments is categorically exempt from the provisions of the California Environmental Quality Act pursuant to California Code of Regulations, title 14, sections 15300 and 15308, as an action taken to assure the protection of the environment which will not have a significant effect on the environment and where the regulatory process involves procedures for protection of the environment.

APCD Meeting 3/7/95  
Agenda Item #3

**OFFICIAL RECORD**

Clerk of the Board of Supervisors

Exhibit No. 1 Agenda No. APCD-3

Meeting Date 3-7-95 ( )

Presented by Staff

Document No. 762167-A

THOMAS J. PASTUSZKA  
Clerk of the Board of Supervisors

Re Rules and Regulations of the )  
Air Pollution Control District )  
of San Diego County . . . . .)

RESOLUTION NO. 95-98  
TUESDAY, MARCH 7, 1995

**RESOLUTION AMENDING RULES 67.19, 67.22 AND 67.24  
OF REGULATION IV  
OF THE RULES AND REGULATIONS OF THE  
SAN DIEGO COUNTY AIR POLLUTION CONTROL DISTRICT**

On motion of Member Roberts, seconded by Member Slater the following resolution is adopted:

**WHEREAS**, the San Diego County Air Pollution Control Board, pursuant to Section 40702 of the Health and Safety Code, adopted Rules and Regulations of the Air Pollution Control District of San Diego County; and

**WHEREAS**, said Board now desires to amend said Rules and Regulations; and

**WHEREAS**, notice has been given and a public hearing has been had relating to the amendment of said Rules and Regulations pursuant to Section 40725 of the Health and Safety Code.

**NOW THEREFORE IT IS RESOLVED AND ORDERED** by the San Diego County Air Pollution Control Board that the Rules and Regulations of the Air Pollution Control District of San Diego County be and hereby are amended as follows:

1. Rule 67.19 Section (b) is amended to read as follows:

**RULE 67.19. COATING AND PRINTING INK MANUFACTURING  
OPERATIONS**

**(b) EXEMPTIONS**

(1) The provisions of this rule shall not apply to any stationary source where emissions of volatile organic compounds (VOC's) from all coating and/or printing ink manufacturing operations are less than an average of 15.0 pounds (6.8 kg) per day of operation for each calendar month, provided the owner or operator of the stationary source maintains monthly usage and production records of VOC containing materials necessary to establish average daily VOC emission levels. The average daily emission levels shall be determined by taking into account the number of operational days per given month. The monthly records of VOC containing materials shall be retained on site for at least three years and made available to the District upon request.

(2) The requirements of Subsection (d)(2) of this rule shall not apply to a stationary source where the combined uncontrolled emissions of VOC's from all coating and/or ink manufacturing operations, including emissions from equipment cleaning, are less than 50 tons in each calendar year.

(3) The requirements of Subsection (d)(3) of this rule shall not apply to any stationary storage tank with a capacity of less than 550 gallons (2080 liters) or to any stationary storage tank used exclusively for storage of epoxy resins, water-based coatings or inks, or paste inks.

(4) The requirements of Subsections (d)(1) and (d)(2) of this rule shall not apply to mixing vats that are used exclusively for mixing water-based coatings or inks.

2. Rule 67.22 Section (b) is amended to read as follows:

**RULE 67.22. EXPANDABLE POLYSTYRENE FOAM PRODUCT  
MANUFACTURING OPERATIONS**

**(b) EXEMPTIONS**

The requirements of Section (d) of this rule shall not apply to any stationary source with uncontrolled VOC emissions of less than 50 tons per calendar year from EPS foam products manufacturing operations.

3. Rule 67.24 Sections (b), (f) and (g) are amended to read as follows:

**RULE 67.24. BAKERY OVENS**

**(a) APPLICABILITY**

Except as provided in Section (b), this rule is applicable to bakery ovens which emit volatile organic compounds (VOC's) during the baking of yeast-leavened products.

Bakery ovens subject to this rule shall not be subject to Rule 66.

**(b) EXEMPTIONS**

(1) The provisions of this rule shall not apply to bakery ovens which are located at a stationary source where the combined rated heat input capacity of all bakery ovens is less than two million British Thermal Units (BTU) per hour.

It shall be the responsibility of any person claiming the exemption in Subsection (b)(1) to provide information necessary for the District to determine the combined rated heat input capacity of all bakery ovens. Such information may include oven or burner manufacturer specifications, or may include fuel or energy consumption rates for oven start-up period(s) in cases where manufacturer specifications are unavailable.

(2) The provisions of this rule shall not apply to ovens used exclusively for the baking of products leavened chemically without yeast.

(3) The provisions of Sections (d) and (g) of this rule shall not apply to bakery ovens which are located at a stationary source where the uncontrolled emissions of VOC's from all bakery ovens combined is less than 50 tons per calendar year.



(c) **DEFINITIONS**

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

(1) **"Bakery Oven"** means an oven which bakes yeast-leavened products, including but not limited to breads, buns, and rolls.

(2) **"Combustion Stack"** means a stack on a bakery oven which emits exclusively combustion exhaust gases which do not pass through the oven's baking chamber.

(3) **"Comfort Hood Vent"** means a vent or hood used to control air flow outside the entrance or exit of a bakery oven.

(4) **"Exempt Compound"** means any of the following compounds or classes of compounds: 1,1,1-trichloroethane, methylene chloride, trichlorofluoromethane (CFC-11), dichlorodifluoromethane (CFC-12), trifluoromethane (HFC-23), trichlorotrifluoroethane (CFC-113), dichlorotetrafluoroethane (CFC-114), chloropentafluoroethane (CFC-115), chlorodifluoromethane (HCFC-22), dichlorotrifluoroethane (HCFC-123), dichlorofluoroethane (HCFC-141b), 1,1,1,2-tetrafluoroethane (HFC-134a), 1,1,2,2-tetrafluoroethane (HFC-134), chlorodifluoroethane (HCFC-142b), 2-chloro-1,1,1,2-tetrafluoroethane (HCFC-124), pentafluoroethane (HFC-125), 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) **"Fermentation Time"** means the elapsed time between adding yeast to dough or sponge and placing the dough or sponge into a bakery oven, excluding retardation time, expressed in hours.

(6) **"Purge Stack"** means a bakery oven stack used exclusively for evacuation of residual gases from the bakery oven during burner ignition.

(7) **"Retardation Time"** means any portion(s) of the elapsed time between adding yeast to dough or sponge and placing the dough or sponge into a bakery oven, where the dough or sponge is refrigerated at temperatures of less than 10° C (50° F), for the specific purpose of retarding the fermentation process.

(8) **"Stationary Source"** means the same as defined in Rule 20.1.

(9) **"Uncontrolled VOC Emissions"** means VOC emissions from a bakery oven, before application of add-on air pollution control equipment or process modification.

(10) **"Volatile Organic Compound (VOC)"** means any compound of carbon, which may be emitted to the atmosphere during bakery oven operations, except methane,

carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates, ammonium carbonate, and exempt compounds.

(11) **"Yeast Percentage"** means the pounds of yeast added to a hundred pounds of total flour in the recipe.

**(d) STANDARDS**

(1) No person shall operate a bakery oven subject to this rule, unless uncontrolled VOC emissions are reduced by at least 90 percent by weight.

(2) A person may comply with the requirements of Subsection (d)(1) of this rule by using an air pollution control system which:

(i) has been installed in accordance with an Authority to Construct; and

(ii) includes an emission collection system(s) which ducts the exhaust gases from all stacks, except purge stacks, combustion stacks, and comfort hood vents, on all bakery ovens to VOC emission control device(s). Such ducting shall be maintained so as to be free of visible holes, breaks, openings or separations between adjoining components from which VOC's may be emitted to the atmosphere; and

(iii) has one or more VOC emission control devices, each with reduction efficiency of at least 90 percent by weight.

(3) A person subject to the requirements of Subsection (d)(2) shall submit an Operation and Maintenance Plan for the proposed emission control device and emission collection system to the Air Pollution Control Officer for approval, and receive such approval prior to the operation of the control equipment. Thereafter, the plan can be modified, with Air Pollution Control Officer approval, as necessary to ensure compliance. Such plan shall:

(i) identify all key system operating parameters. Key system operating parameters are those necessary to ensure compliance with Subsection (d)(2)(iii) such as temperature, pressure, and/or flow rate; and

(ii) include proposed inspection schedules and anticipated ongoing maintenance regarding the key system operating parameters.

(4) A person subject to the requirements of Subsection (d)(3) shall implement the plan upon approval of the Air Pollution Control Officer, and shall comply with the provisions of the approved plan thereafter.

**(e) RECORDKEEPING**

After December 7, 1994, a person operating a bakery oven(s) subject to this rule shall maintain records in accordance with the following:

(1) Maintain current records necessary to determine VOC emissions for all bakery ovens including, but not limited to, type of each yeast-leavened baked product, yeast percentage for each product, and fermentation time for each product; and

(2) Maintain annual records based on calendar year production rates, by weight, of finished baked product for each yeast-leavened product.

(3) For control equipment, maintain daily records of key system operating parameters specified in Subsection (d)(3)(i), which will demonstrate continuous operation and compliance of the emission control device during periods of emission producing activities.

Records maintained in accordance with Subsection (e)(2) are subject to District verification after 60 days following the end of a calendar year. These records shall be maintained on site for at least three years and shall be made available to the District upon request.

#### (f) TEST METHODS

(1) For the purposes of determining the total annual uncontrolled VOC emissions from a stationary source, VOC emission factors for each yeast-leavened bakery product shall be determined in accordance with both Table 67.24 and the following formula:

$$EF = 0.95 Y_i + 0.19 t_i - 0.51S - 0.86 t_s + 1.90$$

where  $Y_i$  = initial yeast percentage  
 $t_i$  = total fermentation time  
 $S$  = second (spiking) yeast percentage, if applicable  
 $t_s$  = fermentation time for second yeast percentage, if applicable, and  
 $EF$  = emission factor, pounds of VOC emissions per ton of baked product

Annual uncontrolled emission rates shall be calculated by multiplying emission factors and the annual production rate for each yeast-leavened finished bakery product. The highest of the two calculated emission rates for a stationary source shall be used for the purposes of this rule. As deemed appropriate by the Air Pollution Control Officer, emission factors shall instead be determined in accordance with Subsection (f)(2).

(2) VOC emission factors for yeast-leavened bakery products may be determined by EPA Methods 18, 25, and/or 25A (40 CFR 60) as they exist on June 7, 1994, together with exhaust flow rates and oven throughputs. Test procedures shall be performed in accordance with a protocol approved by the Air Pollution Control Officer. An alternative test method may be used provided such method has been approved, in advance, by the Air Pollution Control Officer, ARB and EPA.

(3) Measurement of emission control device reduction efficiency subject to Subsection (d)(2)(iii) of this rule shall be conducted in accordance with EPA Methods 18, 25, and/or 25A (40 CFR 60) as they exist on June 7, 1994. Test procedures shall be performed in accordance with a protocol approved by the Air Pollution Control Officer.

#### (g) COMPLIANCE SCHEDULE

A person operating a bakery oven(s) subject to Subsection (d)(2) of this rule shall meet the following increments of progress:

(1) For an oven which commenced operation prior to June 7, 1994, or for a replacement of such an oven:

(i) By December 7, 1994, submit to the Air Pollution Control Officer any necessary application for Authority to Construct and Permit to Operate an air pollution control system meeting the requirements of Subsection (d)(2);

(ii) By June 7, 1995, install an air pollution control system pursuant to Subsection (d)(2).

(2) For an oven which commences operation on or after June 7, 1994, be in compliance with Subsection (d)(1) by the date of commencement of oven operation.

TABLE 67.24

Yt*	Emission Factor**	Yt*	Emission Factor**	Yt*	Emission Factor**
1.0	0.8488	11.0	5.2947	21.0	9.7405
1.5	1.0711	11.5	5.5170	21.5	9.9628
2.0	1.2934	12.0	5.7393	22.0	10.1851
2.5	1.5157	12.5	5.9616	22.5	10.4074
3.0	1.7380	13.0	6.1839	23.0	10.6297
3.5	1.9603	13.5	6.4061	23.5	10.8520
4.0	2.1826	14.0	6.6284	24.0	11.0743
4.5	2.4049	14.5	6.8507	24.5	11.2966
5.0	2.6272	15.0	7.0730	25.0	11.5189
5.5	2.8495	15.5	7.2953	25.5	11.7412
6.0	3.0718	16.0	7.5176	26.0	11.9635
6.5	3.2941	16.5	7.7399	26.5	12.1857
7.0	3.5163	17.0	7.9622	27.0	12.4080
7.5	3.7386	17.5	8.1845	27.5	12.6303
8.0	3.9609	18.0	8.4068	28.0	12.8526
8.5	4.1832	18.5	8.6291	28.5	13.0749
9.0	4.4055	19.0	8.8514	29.0	13.2972
9.5	4.6278	19.5	9.0737	29.5	13.5195
10.0	4.8501	20.0	9.2959	30.0	13.7418
10.5	5.0724	20.5	9.5182		

\*Yt = (Yeast Percentage) x (Fermentation Time)

If yeast is added in two steps,

Yt = (percentage of initial yeast addition) x (time from initial yeast addition to placement in oven)  
+ (percentage of second yeast addition) x (time from second yeast addition to placement in oven)

\*\* Emission Factor = pounds of VOC per ton of finished baked product

**IT IS FURTHER RESOLVED AND ORDERED** that the subject amendments to Rules 67.19, 67.22 and 67.24, of Regulation IV, shall take effect upon adoption.

**PASSED AND ADOPTED** by the Air Pollution Control Board of the San Diego County Air Pollution Control District, State of California, this 7th day of March, 1995 by the following votes:

AYES: Cox, Jacob, Slater, Roberts, Horn  
NOES: None  
ABSENT: None

APPROVED AS TO FORM AND LEGALITY  
COUNTY COUNSEL

BY J. Dutton  
DEPUTY

This is a true certified copy of the original document on file or of record in my office. It bears the seal of the County of San Diego and signature of the Clerk of the Board of Supervisors, imprinted in purple ink.

Thomas J. Portugal

Clerk of the Board, San Diego County, California

Date: 3/7/95 By Deputy: M. Steele



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

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**AMENDING RULES 67.19, 67.22 AND 67.24  
OF REGULATION IV  
OF THE RULES AND REGULATIONS OF THE  
SAN DIEGO COUNTY AIR POLLUTION CONTROL DISTRICT**

1. Rule 67.19 Section (b) is amended to read as follows:

**RULE 67.19. COATING AND PRINTING INK MANUFACTURING  
OPERATIONS**

**(b) EXEMPTIONS**

(1) The provisions of this rule shall not apply to any stationary source where emissions of volatile organic compounds (VOC's) from all coating and/or printing ink manufacturing operations are less than an average of 15.0 pounds (6.8 kg) per day of operation for each calendar month, provided the owner or operator of the stationary source maintains monthly usage and production records of VOC containing materials necessary to establish average daily VOC emission levels. The average daily emission levels shall be determined by taking into account the number of operational days per given month. The monthly records of VOC containing materials shall be retained on site for at least three years and made available to the District upon request.

(2) The requirements of Subsection (d)(2) of this rule shall not apply to a stationary source where the combined uncontrolled emissions of VOC's from all coating and/or ink manufacturing operations, including emissions from equipment cleaning, are less than 25 50 tons in each calendar year.

(3) The requirements of Subsection (d)(3) of this rule shall not apply to any stationary storage tank with a capacity of less than 550 gallons (2080 liters) or to any stationary storage tank used exclusively for storage of epoxy resins, water-based coatings or inks, or paste inks.

(4) The requirements of Subsections (d)(1) and (d)(2) of this rule shall not apply to mixing vats that are used exclusively for mixing water-based coatings or inks.

2. Rule 67.22 Section (b) is amended to read as follows:

**RULE 67.22. EXPANDABLE POLYSTYRENE FOAM PRODUCT  
MANUFACTURING OPERATIONS**

**(b) EXEMPTIONS**

The requirements of Section (d) of this rule shall not apply to any stationary source with uncontrolled VOC emissions of less than 25 50 tons per calendar year from EPS foam products manufacturing operations.

3. Rule 67.24 Sections (b), (f) and (g) are amended to read as follows:

**RULE 67.24. BAKERY OVENS**

**(a) APPLICABILITY**

Except as provided in Section (b), this rule is applicable to bakery ovens which emit volatile organic compounds (VOC's) during the baking of yeast-leavened products.

Bakery ovens subject to this rule shall not be subject to Rule 66.

**(b) EXEMPTIONS**

(1) The provisions of this rule shall not apply to bakery ovens which are located at a stationary source where the combined rated heat input capacity of all bakery ovens is less than two million British Thermal Units (BTU) per hour.

It shall be the responsibility of any person claiming the exemption in Subsection (b)(1) to provide information necessary for the District to determine the combined rated heat input capacity of all bakery ovens. Such information may include oven or burner manufacturer specifications, or may include fuel or energy consumption rates for oven start-up period(s) in cases where manufacturer specifications are unavailable.

(2) The provisions of this rule shall not apply to ovens used exclusively for the baking of products leavened chemically without yeast.

(3) The provisions of Sections (d) and (g) of this rule shall not apply to bakery ovens which are located at a stationary source where the uncontrolled emissions of VOC's from all bakery ovens combined is less than 25 50 tons per calendar year.

**(c) DEFINITIONS**

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

(1) **"Bakery Oven"** means an oven which bakes yeast-leavened products, including but not limited to breads, buns, and rolls.

(2) **"Combustion Stack"** means a stack on a bakery oven which emits exclusively combustion exhaust gases which do not pass through the oven's baking chamber.

(3) **"Comfort Hood Vent"** means a vent or hood used to control air flow outside the entrance or exit of a bakery oven.

(4) **"Exempt Compound"** means any of the following compounds or classes of compounds: 1,1,1-trichloroethane, methylene chloride, trichlorofluoromethane (CFC-11), dichlorodifluoromethane (CFC-12), trifluoromethane (HFC-23), trichlorotrifluoroethane (CFC-113), dichlorotetrafluoroethane (CFC-114), chloropentafluoroethane (CFC-115), chlorodifluoromethane (HCFC-22), dichlorotrifluoroethane (HCFC-123), dichlorofluoroethane (HCFC-141b), 1,1,1,2-tetrafluoroethane (HFC-134a), 1,1,2,2-tetrafluoroethane (HFC-134), chlorodifluoroethane (HCFC-142b), 2-chloro-1,1,1,2-tetrafluoroethane (HCFC-124), pentafluoroethane (HFC-125), 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) **"Fermentation Time"** means the elapsed time between adding yeast to dough or sponge and placing the dough or sponge into a bakery oven, excluding retardation time, expressed in hours.
- (6) **"Purge Stack"** means a bakery oven stack used exclusively for evacuation of residual gases from the bakery oven during burner ignition.
- (7) **"Retardation Time"** means any portion(s) of the elapsed time between adding yeast to dough or sponge and placing the dough or sponge into a bakery oven, where the dough or sponge is refrigerated at temperatures of less than 10° C (50° F), for the specific purpose of retarding the fermentation process.
- (8) **"Stationary Source"** means the same as defined in Rule 20.1.
- (9) **"Uncontrolled VOC Emissions"** means VOC emissions from a bakery oven, before application of add-on air pollution control equipment or process modification.
- (10) **"Volatile Organic Compound (VOC)"** means any compound of carbon, which may be emitted to the atmosphere during bakery oven operations, except methane, carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates, ammonium carbonate, and exempt compounds.
- (11) **"Yeast Percentage"** means the pounds of yeast added to a hundred pounds of total flour in the recipe.

(d) **STANDARDS**

- (1) No person shall operate a bakery oven subject to this rule, unless uncontrolled VOC emissions are reduced by at least 90 percent by weight.
- (2) A person may comply with the requirements of Subsection (d)(1) of this rule by using an air pollution control system which:
- (i) has been installed in accordance with an Authority to Construct; and
  - (ii) includes an emission collection system(s) which ducts the exhaust gases from all stacks, except purge stacks, combustion stacks, and comfort hood vents, on all bakery ovens to VOC emission control device(s). Such ducting shall be maintained so as to be free of visible holes, breaks, openings or separations between adjoining components from which VOC's may be emitted to the atmosphere; and
  - (iii) has one or more VOC emission control devices, each with reduction efficiency of at least 90 percent by weight.



(3) A person subject to the requirements of Subsection (d)(2) shall submit an Operation and Maintenance Plan for the proposed emission control device and emission collection system to the Air Pollution Control Officer for approval, and receive such approval prior to the operation of the control equipment. Thereafter, the plan can be modified, with Air Pollution Control Officer approval, as necessary to ensure compliance. Such plan shall:

(i) identify all key system operating parameters. Key system operating parameters are those necessary to ensure compliance with Subsection (d)(2)(iii) such as temperature, pressure, and/or flow rate; and

(ii) include proposed inspection schedules and anticipated ongoing maintenance regarding the key system operating parameters.

(4) A person subject to the requirements of Subsection (d)(3) shall implement the plan upon approval of the Air Pollution Control Officer, and shall comply with the provisions of the approved plan thereafter.

#### (e) RECORDKEEPING

After December 7, 1994, a person operating a bakery oven(s) subject to this rule shall maintain records in accordance with the following:

(1) Maintain current records necessary to determine VOC emissions for all bakery ovens including, but not limited to, type of each yeast-leavened baked product, yeast percentage for each product, and fermentation time for each product; and

(2) Maintain annual records based on calendar year production rates, by weight, of finished baked product for each yeast-leavened product.

(3) For control equipment, maintain daily records of key system operating parameters specified in Subsection (d)(3)(i), which will demonstrate continuous operation and compliance of the emission control device during periods of emission producing activities.

Records maintained in accordance with Subsection (e)(2) are subject to District verification after 60 days following the end of a calendar year. These records shall be maintained on site for at least three years and shall be made available to the District upon request.

#### (f) TEST METHODS

(1) For the purposes of determining the total annual uncontrolled VOC emissions from a stationary source, VOC emission factors for each yeast-leavened bakery product shall be determined in accordance with both Table 67.24 and the following formula:

$$EF = 0.95 Y_i + 0.19 t_i - 0.51 S - 0.86 t_s + 1.90$$

where  $Y_i$  = initial yeast percentage

$t_i$  = total fermentation time

$S$  = second (spiking) yeast percentage, if applicable

$t_s$  = fermentation time for second yeast percentage, if applicable, and

EF = emission factor, pounds of VOC emissions per ton of baked product

Annual uncontrolled emission rates shall be calculated by multiplying emission factors and the annual production rate for each yeast-leavened finished bakery product. The highest of the two calculated emission rates for a stationary source shall be used for the purposes of this rule. ~~In cases where annual emissions for a stationary source, as determined using the highest emission rate, exceed 80 percent of the annual emissions specified in Subsection (b)(3), or other cases a~~ As deemed appropriate by the Air Pollution Control Officer, emission factors shall instead be determined in accordance with Subsection (f)(2).

~~Instead of using calculated emission factors, an owner or operator may elect to use VOC emission factors determined according to Subsection (f)(2).~~

(2) VOC emission factors for yeast-leavened bakery products may be determined by EPA Methods 18, 25, and/or 25A (40 CFR 60) as they exist on June 7, 1994, together with exhaust flow rates and oven throughputs. Test procedures shall be performed in accordance with a protocol approved by the Air Pollution Control Officer. An alternative test method may be used provided such method has been approved, in advance, by the Air Pollution Control Officer, ARB, and EPA.

(3) Measurement of emission control device reduction efficiency subject to Subsection (d)(2)(iii) of this rule shall be conducted in accordance with EPA Methods 18, 25, and/or 25A (40 CFR 60) as they exist on June 7, 1994. Test procedures shall be performed in accordance with a protocol approved by the Air Pollution Control Officer.

#### (g) COMPLIANCE SCHEDULE

A person operating a bakery oven(s) subject to Subsection (d)(2) of this rule shall meet the following increments of progress:

(1) For an oven which commenced operation prior to June 7, 1994, or for a replacement of such an oven:

(i) By December 7, 1994, submit to the Air Pollution Control Officer any necessary application for Authority to Construct and Permit to Operate an air pollution control system meeting the requirements of Subsection (d)(2);

(ii) By June 7, 1995, install an air pollution control system pursuant to Subsection (d)(2).

(2) For an oven which commences operation on or after June 7, 1994, be in compliance with Subsection (d)(1) by the date of commencement of oven operation.

(3) ~~For an existing stationary source having a calculated annual emission rate pursuant to Subsection (f)(1) exceeding 80 percent of the emission rate specified in Subsection (b)(3), by August 7, 1994, submit to the Air Pollution Control Officer for approval a plan for emissions testing pursuant to Subsection (f)(2). Such plan shall provide for emissions testing to be completed, and test report(s) submitted, by December 7, 1994.~~

~~Stationary sources electing to comply with Subsections (d)(2) and (g)(1) shall not be subject to Subsection (g)(3).~~

**TABLE 67.24**

Yt*	Emission Factor**	Yt*	Emission Factor**	Yt*	Emission Factor**
1.0	0.8488	11.0	5.2947	21.0	9.7405
1.5	1.0711	11.5	5.5170	21.5	9.9628
2.0	1.2934	12.0	5.7393	22.0	10.1851
2.5	1.5157	12.5	5.9616	22.5	10.4074
3.0	1.7380	13.0	6.1839	23.0	10.6297
3.5	1.9603	13.5	6.4061	23.5	10.8520
4.0	2.1826	14.0	6.6284	24.0	11.0743
4.5	2.4049	14.5	6.8507	24.5	11.2966
5.0	2.6272	15.0	7.0730	25.0	11.5189
5.5	2.8495	15.5	7.2953	25.5	11.7412
6.0	3.0718	16.0	7.5176	26.0	11.9635
6.5	3.2941	16.5	7.7399	26.5	12.1857
7.0	3.5163	17.0	7.9622	27.0	12.4080
7.5	3.7386	17.5	8.1845	27.5	12.6303
8.0	3.9609	18.0	8.4068	28.0	12.8526
8.5	4.1832	18.5	8.6291	28.5	13.0749
9.0	4.4055	19.0	8.8514	29.0	13.2972
9.5	4.6278	19.5	9.0737	29.5	13.5195
10.0	4.8501	20.0	9.2959	30.0	13.7418
10.5	5.0724	20.5	9.5182		

\*Yt = (Yeast Percentage) x (Fermentation Time)

If yeast is added in two steps,

Yt = (percentage of initial yeast addition) x (time from initial yeast addition to placement in oven)  
 + (percentage of second yeast addition) x (time from second yeast addition to placement in oven)

\*\* Emission Factor = pounds of VOC per ton of finished baked product

## WORKSHOP REPORT

### PROPOSED AMENDED RULE 67.19—COATINGS AND PRINTING INKS MANUFACTURING OPERATIONS

### PROPOSED AMENDED RULE 67.22—EXPANDABLE POLYSTYRENE FOAM PRODUCTS MANUFACTURING OPERATIONS

### PROPOSED AMENDED RULE 67.24 - BAKERY OVENS

A workshop notice was mailed to all companies in San Diego County that are involved in manufacturing of coatings, printing inks, or expandable polystyrene foam products. A workshop notice was also mailed to all companies that operate bakeries in San Diego County. In addition, notices were 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 December 15, 1994, and was attended by 10 people. There were no comments addressed specifically to Rules 67.19 and 67.22. A general comment and comments on Rule 67.24 and the District responses are as follows:

#### 1. WORKSHOP COMMENT

How will the change in major source threshold reflected in these rules affect District Regulation XIV (Title V - Operating Permits) ?

#### DISTRICT RESPONSE

Rules 67.19, 67.22, and 67.24 are independent of Regulation XIV. The proposed amendments reflect EPA's reclassification of San Diego County from a severe to a serious ozone nonattainment area and the concomitant increase in the major source threshold for ozone precursors, volatile organic compounds (VOCs) and nitrogen oxides (NOx), from 25 tons per year to 50 tons per year. Consequently, the applicability threshold for the reasonably available control technology (RACT) requirements in these rules was increased to sources with VOC emissions of 50 tons per year or more.

The EPA's reclassification also raises the applicability threshold of Regulation XIV to 50 tons per year for sources emitting ozone precursors. Presently, many California air districts and the ARB are working with EPA to develop specific rules which would allow the District to impose federally enforceable permit conditions to limit a source's potential to emit to less than 50 tons per year of VOC or NOx, thereby exempting the source from Regulation XIV (Title V) permit requirements.

#### 2. WORKSHOP COMMENT

Will there be any changes in the recordkeeping requirements for the smaller bakeries?

#### DISTRICT RESPONSE

No. Bakeries with ovens that have a combined rated heat input capacity of more than two million British Thermal Units are still required to keep records which would enable the District to quantify their emissions.

### **3. WORKSHOP COMMENT**

The rule requires a 90% overall efficiency of add-on control equipment. Other areas of the country only require 81% control efficiency, and this requirement may be reduced in the future to allow the use of alternative control technologies.

#### **DISTRICT RESPONSE**

A 90% VOC control efficiency for bakery ovens is achievable with existing technology and is consistent with the control efficiency requirements for bakery ovens in other California air districts. This level of control is also consistent with the California Clean Air Act requirements that the District adopt all feasible measures to reduce VOC emissions.

### **4. WORKSHOP COMMENT**

Catalytic oxidizers, which are typically used to control bakery oven VOC emissions, are prone to catalyst masking which reduces control efficiency. Allowing for capture efficiency, the rule's requirement for a 90% control efficiency may not be achievable without excessive catalyst cleaning.

#### **DISTRICT RESPONSE**

The District disagrees. The District considers that the direct venting of stack emissions to add-on control equipment, as is the case for bakery ovens, provides a 100% capture efficiency. The 90% control efficiency requirement in the rule allows for some control efficiency degradation from typical start-up levels (95% or higher) because of catalyst deactivation or masking. A catalytic oxidizer used to control emissions from a commercial bakery oven in the Bay Area Air Quality Management District has successfully met a 90% regulatory control efficiency standard for at least a year.

### **5. WORKSHOP COMMENT**

Recent data indicate that it is not cost-effective to require add-on controls, using current technology, on bakery ovens emitting less than 25 tons of VOCs per year. Therefore, Rule 67.24 should exempt bakery ovens emitting less than 25 tons per year.

#### **DISTRICT RESPONSE**

The District disagrees. Rule 67.24 emission control requirements apply to a stationary source with annual VOC emissions of 50 tons or more regardless of the amount of emissions from an individual oven. District calculations indicate that existing add-on control technology (catalytic oxidation) is cost-effective for ovens at bakeries of this size.

In addition, this provides a bakery with multiple ovens the flexibility to control only some of the ovens, as long as the aggregate overall control efficiency for all ovens at the bakery is at least 90%.

**6. WORKSHOP COMMENT**

Can the District amend Rule 67.24 considering cost-effectiveness and control technology issues now?

**DISTRICT RESPONSE**

No. The proposed rule amendments are intended to address issues related to EPA's reclassification of San Diego County from a severe to a serious ozone nonattainment area. The District must submit this rule for Board approval as expeditiously as possible to comply with Federal Clean Air Act requirements and to coordinate with EPA's approval process for the State Implementation Plan. The District will consider any new information on cost-effectiveness and control technology when such information becomes available. If future amendments to the rule are to be considered, they must be consistent with EPA guidance and requirements for Reasonably Available Control Technology.

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