AIR POLLUTION CONTROL DISTRICT
COUNTY OF SAN DIEGO

DATE: June 27, 1995

TO: Air Pollution Control Board

SUBJECT: Adoption of Amendments to Rule 67.11 (Wood Products Coating Operations)

SUMMARY:

Rule 67.11 regulates volatile organic compound (VOC) emissions from the coating (painting) of wood furniture and other wood products. VOCs are ozone precursors.

Recently, the wood coating industry requested the District to reconsider the 1995 VOC limits for certain coatings because current complying coatings do not provide minimum acceptable quality. In addition, it was requested that the VOC limits for some 1,1,1 - trichloroethane (TCA) based coatings be increased.

As a result, the proposed amendments extend the 1995 compliance dates for clear topcoats, multi-colored coatings, pigmented coatings, and sealers to July 1, 1997 in response to concerns from coating manufacturers and users that the quality of currently available complying water-based coatings is unacceptable for many applications. This has been verified by the District.

In addition, the current VOC limits for sealers, clear topcoats, and low solids coatings currently based on TCA, a stratospheric ozone-depleting compound, will be increased until July 1, 1997 to provide time for industry to find complying substitutes. TCA usage is being severely limited by the Environmental Protection Agency (EPA) and production is being phased-out by 1996.

The proposed amendments also set higher VOC limits for coatings applied to refinished wood products, exempt coatings used for wooden musical instruments from the VOC standards, and provide more choices of materials and/or devices for reducing VOC emissions from surface preparation operations and cleaning coating application equipment. The changes also make certain clarifications; update definitions, test methods and requirements for control equipment; and allow facilities using coatings complying with the VOC limits the option of keeping monthly instead of daily records.

Rule 67.11 affects approximately 113 companies. The amendments may result in a short-term VOC emission increase of 0.3 tons per day because of the temporary relaxation of the current VOC limits for sealers, clear topcoats, and low solids coatings to allow time to address the TCA phase-out problem. A draft Negative Declaration has been prepared pursuant to the California Environmental Quality Act. It has been determined that the potential emissions increase will not result in a significant impact on the environment.

Issue

Should the Board adopt amendments to Rule 67.11 (Wood Products Coating Operations) and make changes requested by local businesses?

Recommendation

AIR POLLUTION CONTROL OFFICER

(1) Adopt the resolution amending Rule 67.11 and make appropriate findings:

(i) of necessity, authority, clarity, consistency, non-duplication and reference as required by Section 40727 of the State Health and Safety Code;

(ii) that amended Rule 67.11 will alleviate a problem and would not interfere with attainment of ambient air quality standards (Section 40001 of the State Health and Safety Code);

(iii) that the socioeconomic impact of Rule 67.11 was actively considered and there will be no adverse socioeconomic impact on industry including small business (Section 40728.5 of the State Health and Safety Code);

(iv) that an Initial Study was prepared by the District pursuant to the California Environmental Quality Act, and the Initial Study revealed no substantial evidence that the proposed amendments to Rule 67.11 may have a significant effect on the environment;

(v) that a proposed Negative Declaration was prepared pursuant to the California Environmental Quality Act and that public notice and a public review period were provided for the proposed Negative Declaration; that no comments were received during said public review period; and that considering the initial study and proposed Negative Declaration and the entire record before the Board, a finding be made by the Board in the exercise of its independent judgment that the proposed amendments to Rule 67.11 will not have significant effect on the environment, and that an Environmental Impact Report need not be prepared; and

(vi) that the amendment of Rule 67.11 will not have an adverse effect on wildlife resources, and a Certificate of Fee Exemption for De Minimis Impact Finding was prepared pursuant to Section 753.5 (c) of the Fish and Game Code.

(2) Approve the Certificate of Fee Exemption for De Minimis Impact Finding exempting the District from payment of fees to the California Department of Fish and Game.

Advisory Statement

The Air Pollution Control District Advisory Committee recommended adopting the proposed amendments to Rule 67.11 at its April 26, 1995 meeting.

Fiscal Impact

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

Alternatives

Not adopt the proposed amendments. Changes requested by local businesses will not be made. It will result in hardship to the affected wood coating facilities and may force some of them out of business. Accordingly, this alternative is not recommended.

BACKGROUND:

San Diego County is classified as a serious non-attainment area for the federal and state ozone standards. Both federal and state laws require the District to control Volatile Organic Compounds (VOCs) because they are ozone precursors. In addition, the California Clean Air Act requires the District to adopt rules reflecting all feasible ozone precursor control measures and Best Available Retrofit Control Technology.

Rule 67.11 was first adopted in March 1989, to control VOC emissions from wood furniture coating and associated cleaning operations. It was subsequently amended in December 1990, to correct deficiencies identified by EPA and expand the applicability to general wood product coating operations. The rule also established VOC standards for different types of topcoats, sealers and stains applied to wood products and required certain lower VOC limits in January 1995, to reflect evolving new water-based technology.

Recently, the wood coating industry requested the District to reconsider the 1995 limits for clear topcoats, multi-colored coatings, pigmented coatings, and sealers because presently available water-based coatings do not provide the minimum quality necessary for many applications required by local businesses. In addition, the industry asked the District to revise the VOC limits for some coatings complying with the standards currently in effect, because these coatings were mostly based on 1,1,1-trichloroethane (TCA). TCA does not participate in the formation of ground-level ozone and is exempt from District regulations but it is a stratospheric ozone-depleting compound. Its usage is being severely limited by EPA and production is being phased-out by 1996. Thus, it will no longer be available for industry to manufacture the low VOC coatings currently required by the rule.

A number of wood coating facilities have been visited, the most current information available from coating manufacturers and other air districts has been reviewed. Based on this analysis, the extension of the current VOC limits for some coating categories is justified. Accordingly, the proposed amendments extend the January 1, 1995 compliance dates for lower VOC limits for clear topcoats, multi-colored coatings, pigmented coatings, sealers and other coatings applied to new wood products, until July 1, 1997. Companies not in compliance with the current VOC limits are presently operating under a variance from the Hearing Board. Also, the amendments establish separate, higher VOC limits for coatings used to refinish wood products. In addition, the current VOC limits for sealers, clear topcoats and low-solids coatings will be temporarily increased to July 1, 1997 to provide industry the opportunity to find substitutes for coatings currently based on TCA.

An exemption from the VOC limits has been provided for coatings applied to wooden musical instruments. A local guitar manufacturer has been diligent in making all reasonable efforts to find complying stains, sealers and topcoats for a wide variety of woods (maple, mahogany, rosewood, etc.) from which guitars are made. The company has worked with coating manufacturers for over

two years to test coatings and develop new low VOC ultra-violet-cured coatings that perform well on some woods and in certain applications. They are currently using low VOC coatings for all possible woods and applications that provide satisfactory performance. However, the low VOC coatings meeting the limits of the rule are not satisfactory for the remaining applications (i.e. stains and sealers) and woods (e.g. rosewood). Their use has resulted in guitar finish cracking when wood expands and contracts as relative humidity changes, improper coating hardness allowing the guitar case to leave indentations in the finish during storage, and poor aesthetic properties. These conditions are unacceptable for the very high quality instruments. Total VOC emissions from coatings usage at this facility are low; approximately 15 pounds per day. The District is unaware of any coating technology currently available or under development that will address these problems and believes the proposed exemption is appropriate for this highly specialized use.

The changes provide more choices of materials and/or devices for reducing VOC emissions from surface preparation and cleaning coating application equipment. They make a number of clarifications; update definitions, test methods and requirements for control equipment; and give facilities using coatings complying with the VOC limits the option of keeping monthly instead of daily records.

The current Rule 67.11 has not yet been approved by EPA as part of the State Implementation Plan (SIP) for San Diego County. The District has asked EPA not to do so until the proposed amendments are adopted and submitted to EPA. However, after adoption, the more stringent technology forcing 1997 VOC limits will not be submitted to EPA for inclusion in the SIP. This will allow the District to further extend the deadlines for these limits, if necessary in 1997, without EPA approval. Also, EPA will not enforce these lower limits on local businesses if they are not included in the SIP.

EPA is presently developing a Control Technique Guideline specifying Reasonably Available Control Technology for wood furniture coating operations. If any of the federal VOC limits are more stringent than those in Rule 67.11, the District will be required to amend Rule 67.11 to incorporate the minimum federal requirements. The District will submit any required more stringent VOC limits to EPA as a SIP revision at that time.

The proposed changes may result in a short-term VOC emission increase of 0.3 tons per year because of the temporary relaxation of the present VOC standards for sealers, clear topcoats and low-solids coatings to allow time to address the TCA phase-out problem. The District has determined that such a small emission increase will not affect the 15% Rate-of-Progress plan toward attainment of the National Ambient Air Quality Standard for ozone, or the District's demonstration for attaining this standard in 1999 as required by the federal Clean Air Act.

Socioeconomic Impact Assessment

Rule 67.11 affects 113 facilities involved in wood products coating operations. All but two of them are small businesses. The proposed amendments minimize any potential adverse socio-economic impacts by either retaining higher VOC limits for certain coatings, as requested by industry, or by extending the deadline implementing lower VOC limits for some coatings by two years. All cleaning materials complying with the new optional VOC emission limitations are currently available. Therefore, the amendments to Rule 67.11 are not expected to have any adverse impact on employment and the economy of the region. They are also not expected to result in any additional costs to affected businesses including small businesses. Less stringent alternatives will result in a significant VOC emissions increase. More stringent alternatives will result in an unacceptable burden to a number of businesses.

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. All major amendments to Rule 67.11 are consistent with this Board directive because they have been requested by local industry .

California Environmental Quality Act

An environmental review consistent with the California Environmental Quality Act has been performed because the amendments to Rule 67.11 may result in the temporary VOC emission increase of 0.3 tons per day. An Initial Study conducted by the District concluded that this will not have a significant effect on the environment, and a draft Negative Declaration was prepared pursuant to the California Environmental Quality Act. It was determined that the potential increase in VOC emissions will not amount to a significant impact on the environment, and there is no substantial evidence that any aspect of the proposed changes may result in a significant effect upon the environment.

Based on the entire record and including the information contained in the Initial Study, there is also no evidence that the Rule 67.11 amendments may have any potential for adverse effect on wildlife resources or the habitat upon which the wildlife depends. On the basis of substantial evidence, the District has rebutted the presumption of adverse effect to the resources listed in Section 753(d) of the Fish and Game Code.

A public workshop on proposed Rule 67.11 was held on March 8, 1995. The workshop report is attached.

Concurrence:

DAVID E. JANSSEN
Chief Administrative Officer

Respectfully submitted,

R. J. SOMMERVILLE
Air Pollution Control Officer

AIR POLLUTION CONTROL BOARD
AGENDA ITEM
INFORMATION SHEET

SUBJECT: Adoption of Amendments to Rule 67.11 (Wood Products Coating Operations)

SUPV DIST.: All

TD 6/8/95

COUNTY COUNSEL APPROVAL: Form and Legality [X] Yes [ ] N/A
[ ] Standard Form [ ] Ordinance [X] Resolution

CHIEF FINANCIAL OFFICER/AUDITOR REVIEW: [X] N/A [ ] Yes
4 VOTES: [ ] Yes [X] No

CONTRACT REVIEW PANEL: [ ] Approved _____ [X] N/A

CONTRACT NUMBER(S): N/A

PREVIOUS RELEVANT BOARD ACTION: APCB #3-3A 3/14/89
APCB #6-6A 12/18/90

BOARD POLICIES APPLICABLE: N/A

CITIZEN COMMITTEE STATEMENT: The Air Pollution Control District Advisory Committee recommended adoption of the proposed amendments to Rule 67.11 at its April 26, 1995 meeting.

CONCURRENCES: N/A

ORIGINATING DEPARTMENT: Air Pollution Control District County of San Diego

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

R.J. SOMMERVILLE
DEPARTMENT AUTHORIZED REPRESENTATIVE

JUNE 27, 1995
MEETING DATE

FINDINGS OF THE SAN DIEGO COUNTY AIR POLLUTION CONTROL BOARD IN RESPECT TO ADOPTION OF AMENDMENTS TO RULE 67.11 (WOOD PRODUCTS COATING OPERATIONS)

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 Rule 67.11 is necessary to prevent hardship to wood products facilities.

2. (Authority) The adoption of the proposed rule amendments is authorized by Health and Safety Code sections 40001 and 40702.

3. (Clarity) The proposed rule amendments are written so that their meaning can be easily understood by persons directly affected by the rule.

4. (Consistency) The proposed rule amendments are in harmony with, and not in conflict with or contrary to, existing statutes, court decisions, and state and federal regulations.

5. (Nonduplication) The proposed amendments do not impose the same requirements as an existing state or federal regulation.

6. (Reference) The proposed amendments implement subsection 182(b)(2) of the federal Clean Air Act [42 U.S.C. section 7511a, subsection (b)(2)], mandating rules requiring reasonably available control technology for stationary sources of volatile organic compound (VOC) emissions.

B. The Air Pollution Control Board has actively considered the socioeconomic impact of the proposed amendments and finds that there will be no adverse socioeconomic impacts on industry including small business.

C. After considering the record of the Initial Study performed pursuant to the California Environmental Quality Act, and no comments having been received during the public review period on the draft Negative Declaration dated May 1, 1995, the Air Pollution Control Board finds in the exercise of its independent judgment that the amendments to Rule 67.11 will not have a significant effect on the environment, and that an Environmental Impact Report need not be prepared, and that the proposed Negative Declaration is hereby approved.

D. The Air Pollution Control Board further finds in accordance with Health and Safety Code section 40001 that the adoption of the proposed rule amendments is necessary to prevent hardship to wood products facilities, and that the proposed amendments will not interfere with the attainment of state and federal ambient air quality standards.

APCD Meeting 6/27/95
Agenda Item #5

RESOLUTION NO. 95-225

JUNE 27, 1995

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

RESOLUTION AMENDING RULE 67.11 OF REGULATION IV OF THE RULES AND REGULATIONS OF THE SAN DIEGO COUNTY AIR POLLUTION CONTROL DISTRICT

On motion of Member Horn, 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 that the San Diego County Air Pollution Control Board finds that the proposed amendments to Rule 67.11 will not have significant effect on the environment and that an Environmental Impact Report need not be prepared pursuant to the California Environmental Quality Act; and

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:

Rule 67.11 is amended to read as follows:

RULE 67.11 WOOD PRODUCTS COATING OPERATIONS

(a) **APPLICABILITY**

(1) Except as otherwise provided in Section (b), this rule is applicable to all wood products coating operations

(2) Any coating operation subject to the requirements of Rules 67.0 or 67.18 shall not be subject to this rule.

(3) Rule 66 shall not apply to any coating operation which is subject to this rule.

(b) **EXEMPTIONS**

(1) The provisions of Sections (d), (e) and (f) shall not apply to the following:

(i) A stationary source which applies less than 500 gallons of coatings to wood products in every consecutive twelve-month period. It shall be the responsibility of any person claiming this exemption to maintain monthly purchase and monthly or daily usage records. These records shall be maintained on-site for three years and made available to the District upon request.

(ii) Coatings applied using non-refillable handheld aerosol spray containers.

(2) The provisions of Subsection (d)(1) shall not apply to the following:

(i) Any coatings when applied by the use of air brushes with a coating capacity of two ounces (59.1 ml) or less.

(ii) Any coatings when applied during touch-up operations.

(3) The provisions of Subsections (d)(2) and (d)(3) shall not apply to coatings applied to wooden musical instruments.

(c) **DEFINITIONS**

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

(1) **"Adhesive"** means a material applied to a wood surface for the sole purpose of bonding the wood surface with another wood or non-wood surface by attachment.

(2) **"Binder"** means a non-volatile polymeric organic material, such as a resin, which forms a surface film during coating applications.

(3) **"Clear Topcoat"** means a final coating which contains binders, but not opaque pigments, and is specifically formulated to form a transparent or translucent solid protective film. Clear topcoats include clear lacquers and varnishes.

(4) **"Coating"** means a material containing more than 20 grams per liter of VOC as applied, less water and exempt compounds, which can be applied as a thin layer to a substrate, and which dries or cures to form a continuous solid film, including but not limited to any paint, ink, sealer, varnish, or lacquer, and excluding any adhesives. Coating also includes stains, inks, fillers, washcoats, and toners.

(5) **"Coating Operation"** means all steps involved in the application, drying and/or curing of surface coatings, including touch-up operations, and associated stripping, surface preparation and coating application equipment cleaning.

(6) **"Conversion Varnish"** means a topcoat which is comprised of a homogeneous transparent or translucent liquid (alkyd-amino resin), which when acid catalyzed and applied, hardens by evaporation and polymerization.

(7) **"Dip Coat"** means a coating application method accomplished by dipping an object into the coating material.

(8) **"Electrostatic Spray"** means a coating application method accomplished by charging atomized paint particles for deposition by electrostatic attraction.

(9) **"Exempt Compound"** means any of –

(i) the following compounds:
1,1,1-trichloroethane,
methylene chloride, (dichloromethane),
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),

(ii) the following linear volatile methyl siloxane (VMS) compounds:
hexamethyldisiloxane (MM),
octamethyltrisiloxane (MDM),
decamethyltetrasiloxane (MD_2M),
dodecamethylpentasiloxane (MD_3M),
tetradecamethylhexasiloxane (MD_4M),
dimethyl silicones and siloxanes (MD_xM),

(iii) the following cyclic volatile methyl siloxane (VMS) compounds:
hexamethylcyclotrisiloxane (D_3),
octamethylcyclotetrasiloxane (D_4),
decamethylcyclopentasiloxane (D_5),
dodecamethylcyclohexasiloxane (D_6),
cyclopolydimethylsiloxanes (D_x),

(iv) the following branched volatile methyl siloxane (VMS) compounds:
1,1,1,3,5,5,5-heptamethyl-3-[(trimethylsilyl)oxyl]-trisiloxane (M_3T),

1,1,1,5,5,5-hexamethyl-3,3,bis[(trimethylsilyl)oxy]-trisiloxane (M_4Q),

pentamethyl[(trimethylsilyl)oxy]cyclotrisiloxane (MD_3),

(v) the following four classes of perfluorocarbon (PFC) compounds:

cyclic, branched, or linear, completely fluorinated alkanes,

cyclic, branched, or linear, completely fluorinated ethers with no unsaturations,

cyclic, branched, or linear, completely fluorinated tertiary amines with no unsaturations, and

sulfur containing perfluorocarbons with no unsaturations and with sulfurbonds only to carbon and fluorine.

(10) **"Filler"** means a material used to fill in cracks, grains and imperfections of wood before applying a coating.

(11) **"Flow Coat"** means a coating application method accomplished by flowing a stream of coating over an object.

(12) **"Glaze Stain"** means a semitransparent tinted coating applied on a previously coated surface to produce a decorative effect.

(13) **"Hand Application Method"** means a coating application method accomplished by applying a coating by manually held, non-mechanically operated equipment. Such equipment includes paint brushes, hand rollers, rags and sponges.

(14) **"High-Solids Stain"** means a stain containing more than one pound of solids per gallon.

(15) **"High-Volume Low-Pressure (HVLP) Spray"** means a coating application method which uses pressurized air at a permanent pressure between 0.1 and 10.0 psig, not to exceed 10.0 psig, measured at the air cap of the coating application system.

(16) **"Ink"** means a liquid that contains dyes and/or colorants and is used to make markings, but not to protect surfaces.

(17) **"Low-Solids Coating"** means a coating containing one pound of solids per gallon, or less.

(18) **"Low-Solids Stain"** means a stain containing one pound of solids per gallon, or less.

(19) **"Medium Density Fiberboard (MDF) Coating"** means the initial coating which is applied directly to the surface of MDF, which is a wood product composed of tightly compressed wood fibers bonded with resins, and has a density greater than 45 pounds per cubic foot.

(20) **"Multi-Colored Coating"** means a coating which exhibits more than one color when applied and which is packaged in a single container and applied in a single coat.

(21) **"New Wood Product"** means a wood product which has not been previously coated. A wood product from which coatings have been removed to repair flaws in initial coating applications is a new wood product.

(22) **"Pigmented Coating"** means an opaque coating containing binders and colored pigments, and formulated to hide the wood surfaces.

(23) **"Refinished Wood Product"** means a post-consumer wood product which has had some or all of the coatings removed, and to which new coatings are applied in order to preserve or restore the post-consumer wood product to its original condition. A wood product from which coatings have been removed to repair flaws in initial coatings applications is not a refinished wood product.

(24) **"Roll Coat"** means a coating application method accomplished by rolling a coating onto a flat surface using a roll applicator.

(25) **"Sealer"** means a coating which contains binders and which seals wood surfaces prior to the application of subsequent coatings.

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

(27) **"Stripper"** means a liquid applied to remove a coating or coating residue.

(28) **"Toner"** means a coating which contains not more than one pound of binders and dyes or pigments and which is used to add tint to a coated surface.

(29) **"Touch-up Operation"** means the portion of a coating operation which is incidental to the main coating process but necessary to cover minor imperfections or minor mechanical damage incurred prior to intended use, or to achieve coverage as required.

(30) **"Transfer Efficiency"** means the ratio of the weight of coating solids adhering to the part being coated to the weight of coating solids used in the application process expressed as a percentage.

(31) **"Volatile Organic Compound"** (VOC) means any volatile compound of carbon, which may be emitted to the atmosphere during operations or activities subject to this rule, except methane, carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates, ammonium carbonates, and exempt compounds.

(32) **"VOC Content Per Volume of Coatings, Less Water and Exempt Compounds"** means the weight of VOC per combined volume of VOC and coating solids and is calculated by the following equation:

$$C_c voc = (W_s - W_w - W_{es}) / (V_m - V_w - V_{es})$$

where:

$C_c voc$	=	VOC content per volume of coating, less water and exempt compounds
W_s	=	weight of volatile compounds including water and exempt compounds
W_w	=	weight of water
W_{es}	=	weight of exempt compounds
V_m	=	volume of material including water and exempt compounds

V_w = volume of water

V_{es} = volume of exempt compounds

(33) **"VOC Content Per Volume of Material"** means the weight of VOC per volume of material and is calculated by the following equation:

$$C_{mvoc} = (W_s - W_w - W_{es}) / V_m$$

where:

C_{mvoc} = VOC content per volume of material

W_s = weight of volatile compounds including water and exempt compounds

W_w = weight of water

W_{es} = weight of exempt compounds

V_m = volume of material including water and exempt compounds

(34) **"Wash Coat"** means a coating containing not more than one pound of solids per gallon, which is used to seal wood surfaces, prevent undesired staining and control penetration. A wash coat may also be used to provide a barrier coat when paper laminates are applied to the wood surface, or when glazes are applied during the coating operation.

(35) **"Wood Products"** means any objects that are made of or primarily fabricated with solid wood, wood composition, bamboo and/or rattan, including furnishings, art objects, tables, chairs, beds, sofas, and shutters and cabinets which are not permanently attached to stationary structures at the time of coating.

(d) **STANDARDS**

(1) Application Equipment

Except as provided in Subsection (b)(2), no coatings shall be applied unless one of the following application methods is used:

(i) Hand application method, or

(ii) Dip coat, or

(iii) Roll coat, or

(iv) Flow coat, or

(v) Electrostatic spray, or

(vi) High-volume low-pressure (HVLP) spray, or

(vii) Other coating application methods that are demonstrated to have a transfer efficiency at least equal to one of the above application methods, and which are used in such a manner that the parameters under which they were tested are permanent features of the method. Such coating application methods shall be approved in writing by the Air Pollution Control Officer prior to use.

(2) VOC Limits for New Wood Products

(i) Except as provided in Subsection (d)(2)(ii), on and after (*date of adoption*), a person shall not apply any coating to a new wood product with a VOC content in excess of the following limits expressed as grams of VOC per liter of coating, as applied, excluding water and exempt compounds:

CATEGORY	VOC LIMIT
Clear Topcoats	680
Fillers	500
High-Solids Stains	700
Inks	500
Medium Density Fiberboard (MDF) Coatings	680
Multi-Colored Coatings	685
Pigmented Coatings	600
Sealers	680
Any Other Coating	420

(ii) On and after (*date of adoption*), a person shall not apply the following low-solids coatings to a new wood product with a VOC content in excess of the following limit expressed as grams of VOC per liter of material, as applied:

CATEGORY	VOC LIMIT
Low-Solids Stains, Toners or Wash Coats	700

(iii) Except as provided in Subsection (d)(2)(iv), on and after July 1, 1997, a person shall not apply any coating to a new wood product with a VOC content in excess of the following limits expressed as grams of VOC per liter of coating, as applied, excluding water and exempt compounds:

CATEGORY	VOC LIMIT
Clear Topcoats	275
Conversion Varnishes	550
Fillers	500
High-Solids Stains	550
Inks	500
Medium Density Fiberboard (MDF) Coatings	550
Multi-Colored Coatings	685
Pigmented Coatings	275
Sealers	550
Any Other Coating	275

(iv) On and after July 1, 1997, a person shall not apply the following low-solids coatings to a new wood product with a VOC content in excess of the following limit expressed as grams of VOC per liter of material, as applied:

CATEGORY	VOC LIMIT
Low-Solids Stains, Toners or Wash Coats	480

The requirements of Subsection (d)(2) may be met using an Alternative Emission Control Plan (AECP) that has been approved pursuant to Rule 67.1.

(3) VOC Limits for Refinished Wood Products

(i) Except as provided in Subsection (d)(3)(ii), on and after (*date of adoption*), a person shall not apply any coating to a refinished wood product with a VOC content in excess of the following limits expressed as grams of VOC per liter of coating, as applied, excluding water and exempt compounds:

CATEGORY	VOC LIMIT
Clear Topcoats	680
Fillers	500
High-Solids Stains	700
Inks	500
Medium Density Fiberboard (MDF) Coatings	680
Multi-Colored Coatings	685
Pigmented Coatings	600
Sealers	680
Any Other Coating	420

(ii) On and after (*date of adoption*), a person shall not apply the following low-solids coatings to a refinished wood product with a VOC content in excess of the following limit expressed as grams of VOC per liter of material, as applied:

CATEGORY	VOC LIMIT
Low-Solids Stains, Toners or Wash Coats	700

The requirements of Subsection (d)(3) may be met using an Alternative Emission Control Plan (AECP) that has been approved pursuant to Rule 67.1.

(4) Surface Preparation and Stripping Materials

Except as provided in subsection (d)(5), a person shall not use VOC containing materials for surface preparation or stripping unless:

(i) The material contains 200 grams or less of VOC per liter of material; or

(ii) The material has an initial boiling point of 190° C (374° F) or greater; or

(iii) The material has a total VOC vapor pressure of 20 mm Hg or less, at 20° C (68° F).

(5) Cleaning of Application Equipment

A person shall not use VOC containing materials for the cleaning of application equipment used in operations subject to this rule unless:

(i) The cleaning material contains 200 grams or less of VOC per liter of material; or

(ii) The cleaning material has an initial boiling point of 190° C (374° F) or greater; or

(iii) The cleaning material has a total VOC vapor pressure of 20 mm Hg or less, at 20° C (68° F); or

(iv) The cleaning material is flushed or rinsed through the application equipment in a contained manner that will minimize evaporation into the atmosphere; or

(v) The application equipment or equipment parts are cleaned in a container which is open only when being accessed for adding, cleaning, or removing application equipment or when cleaning material is being added, provided the cleaned equipment or equipment parts are drained to the container until dripping ceases; or

(vi) A system is used that totally encloses the component parts being cleaned during the washing, rinsing, and draining processes; or

(vii) Other application equipment cleaning methods that are demonstrated to be as effective as any of the equipment described above in minimizing the emissions of VOC to the atmosphere, provided that the device has been tested and approved by the Air Pollution Control Officer prior to use.

(6) No person shall require for use or specify the application of a coating subject to this rule if such use or application results in a violation of this rule. This prohibition shall apply to all written or oral contracts under the terms of which any coating is applied to any wood product at any location within San Diego County.

(7) Spray application equipment shall not be used to dispose of waste coatings or solvents into the air.

(e) CONTROL EQUIPMENT

(1) In lieu of complying with the provisions of Subsections (d)(2), (d)(3), (d)(4) and/or (d)(5) of this rule, a person may use an air pollution control system which:

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

(ii) Includes an emission collection system which captures organic gaseous emissions, including emissions associated with applicable coating, equipment cleaning, and surface preparation operations, and transports the captured emissions to an air pollution control device; and

(iii) Has a combined emissions capture and control device efficiency of at least 85 percent by weight.

(2) A person electing to use control equipment pursuant to Section (e)(1) shall submit to the Air Pollution Control Officer for approval an Operation and Maintenance plan for the proposed emission control device and emission collection system and receive approval prior to 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 (e)(1)(iii), such as temperature, pressure, and/or flow rate; and

(ii) Include proposed inspection schedules, anticipated ongoing maintenance, and proposed recordkeeping practices regarding the key system operating parameters.

(3) Upon approval of the Air Pollution Control Officer, a person subject to the requirements of Section (e) shall implement the Operation and Maintenance plan and shall comply with the provisions of the approved plan thereafter.

(f) RECORDKEEPING

All records shall be retained on-site for at least three years and shall be made available to the District upon request.

(1) Any person subject to the provisions of Subsections (d)(2), (d)(3), (d)(4) and/or (d)(5) of this rule shall maintain records in accordance with the following:

(i) Maintain a current list of coatings, strippers, surface preparation and cleaning materials in use which provides all of the VOC data necessary to evaluate compliance, including but not limited to:

(A) manufacturer name and identification for each coating or coating component for multi-component coatings, (this includes any components such as bases, catalysts, thinners or reducers, when supplied in separate containers), stripper, surface preparation and cleaning material; and

(B) mix ratio of components; and

(C) VOC content, vapor pressure and/or initial boiling point, as applicable, for each coating, or coating component for multi-component coatings, stripper, surface preparation and cleaning material.

(ii) Maintain current documentation to demonstrate applicability of any coating category pursuant to Subsection (d)(2) or (d)(3) of this rule.

(iii) Maintain daily or monthly records of the amount of each coating or each coating component for multi-component coatings used.

(iv) Maintain daily or monthly records of the amount of each stripper, surface preparation and cleaning material used.

(v) Maintain records of the dates and amounts of material added to coating dip tanks.

(2) Any person using control equipment pursuant to Section (e) of this rule shall:

(i) Maintain records in accordance with Subsection (f)(1); and

(ii) For all coatings, strippers, surface preparation and/or cleaning materials not in compliance with Subsections (d)(2), (d)(3), (d)(4) or (d)(5) of this rule, maintain daily records of the amount of each coating or each coating component for multi-component coatings, stripper, surface preparation and cleaning material used; and

(iii) Maintain daily records of key system operating parameters as approved in the Operation and Maintenance plan. Such records shall be sufficient to document continuous compliance with Subsection (e)(1)(iii) during periods of emission producing activities.

(g) TEST METHODS

(1) Perfluorocarbon (PFC) compounds shall be assumed to be absent from a coating, cleaning, or surface preparation material subject to this rule unless a manufacturer of the material or a facility operator identifies the specific individual compound(s) and the amount(s) present in the material and provides an EPA and ARB approved test method which can be used to quantify the specific compounds.

(2) Measurements of transfer efficiency subject to Subsection (d)(1)(vii) of this rule shall be conducted in accordance with the South Coast Air Quality Management District's "Spray Equipment Transfer Efficiency Test Procedure for Equipment User" as it exists on *(date of adoption)*.

(3) Measurement of the VOC content of coatings, surface preparation and cleaning materials subject to Subsections (d)(2), (d)(3), (d)(4)(i), or (d)(5)(i) of this rule shall be conducted in accordance with EPA Test Method 24 (40 CFR 60, Appendix A) as it exists on (*date of adoption*).

(4) Measurement of the VOC content of ultraviolet radiation-cured coatings subject to Subsections (d)(2) and/or (d)(3) of this rule shall be conducted in accordance with ASTM Standard Test Method D5403-93. Measurement of the water content and exempt solvent content, if applicable, shall be conducted and reported in accordance with ASTM Standard Test Methods D 3792-91 and D 4457-85.

(5) Measurement of the initial boiling point of cleaning and surface preparation materials subject to Subsection (d)(4)(ii) and/or (d)(5)(ii) of this rule shall be conducted in accordance with ASTM Standard Test Method D1078-86 for distillation range of volatile organic liquids.

(6) Calculation of total VOC vapor pressure for materials subject to Subsection (d)(4)(iii) and/or (d)(5)(iii) of this rule shall be conducted in accordance with the District's "Procedures for Estimating the Vapor Pressure of VOC Mixtures" as it exists on (*date of adoption*). If the vapor pressure of the liquid mixture, as calculated by this procedure, exceeds the limits specified in Subsection (d)(4)(iii) and/or (d)(5)(iii), the vapor pressure shall be determined in accordance with ASTM Standard Test Method D2879-86. The solvent composition shall be determined using one of the following ASTM standard recommended practices: E168-92, E169-93 or E260-91. The fraction of water and exempt compounds in the liquid phase shall be determined by using ASTM Standard Test Methods D3792-91 and D4457-85 and shall be used to calculate the partial pressure of water and exempt compounds. The results of vapor pressure measurements obtained using ASTM Test Method D2879-86 shall be corrected for partial pressure of water and exempt compounds.

(7) Measurement of solvent losses from alternative application cleaning equipment subject to Subsection (d)(5)(vii) shall be conducted and reported in accordance with the South Coast Air Quality Management District's "General Test Method for Determining Solvent Losses from Spray Gun Cleaning Systems" as it exists on *(date of adoption)*

(8) Measurement of control device efficiency subject to Subsection (e)(1) of this rule shall be conducted in accordance with EPA Methods 18 and/or 25A (40 CFR 60) as they exist on (*date of adoption*) and in accordance with a protocol approved by the Air Pollution Control Officer.

(9) Measurement of the emission collection system capture efficiency subject to Subsection (e)(1) of this rule shall be determined according to EPA's technical document, "Guidelines for Determining Capture Efficiency," dated January 9, 1995, using a protocol approved by the Air Pollution Control Officer. Subsequent to the initial compliance demonstration period, applicable key system operating parameters, as approved by the Air Pollution Control Officer, may be used as verification that capture efficiency has not diminished.

IT IS FURTHER RESOLVED AND ORDERED that the subject amendments to Rule 67.11, 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 27th day of June, 1995 by the following votes:

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

APPROVED AS TO FORM AND LEGALITY
COUNTY COUNSEL

BY [signature] 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. Pastuszka
Clerk of the Board, San Diego County, California

Date: 6/27/95 By Deputy: [signature]

6/27/95 (APCB 5)
Resolution No. 95-225

AIR POLLUTION CONTROL DISTRICT
COUNTY OF SAN DIEGO

PROPOSED AMENDMENTS TO RULE 67.11

CHANGE COPY

Rule 67.11 is amended to read as follows:

RULE 67.11 WOOD PRODUCTS COATING OPERATIONS

(a) APPLICABILITY

(1) Except as otherwise provided in Section (b), ~~This~~ this rule is applicable to all ~~surface coating of~~ wood products coating operations ~~including refinishing or refurbishing, in which volatile organic compounds (VOC) are employed. Operations subject to this rule and in compliance with Section (d) of this rule shall not be subject to Rule 66.~~

(2) Any coating operation subject to the requirements of Rules 67.0 or 67.18 shall not be subject to this rule.

(3) Rule 66 shall not apply to any coating operation which is subject to this rule.

(b) EXEMPTIONS

(1) The provisions of Sections (d), (e) and (f) ~~this rule~~ shall not apply to the following:

(i) A stationary source which applies less than 500 gallons of coatings to wood products in every consecutive twelve-month period. ~~wood products coating operations at a stationary source, as defined in Rule 20.1, using less than a total of 500 gallons of coatings in every consecutive twelve-month period.~~ It shall be the responsibility of any person claiming this exemption to maintain monthly purchase and monthly or daily usage records ~~of coating usage~~. These records shall be maintained ~~retained~~ on-site for ~~at least~~ three years and ~~shall be~~ made available to the District ~~immediately~~ upon request.

(ii) Coatings applied using non-refillable handheld aerosol spray containers. ~~The provisions of this rule shall not apply to coating operations subject to District Rules 67.0 and 67.18.~~

(2) The provisions of Subsection (d)(1) shall not apply to the following:

(i) Any coatings when applied by the use of air brushes with a coating capacity of two ounces (59.1 ml) or less.

(ii) Any coatings when applied during touch-up operations.

(3) The provisions of Subsections (d)(2) and (d)(3) shall not apply to coatings applied to wooden musical instruments.

(c) **DEFINITIONS**

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

(1) **"Adhesive"** means a material applied to a wood surface for the sole purpose of bonding the wood surface with another wood or non-wood surface by attachment.

~~(1) **"Application Equipment"** means equipment used in hand application methods such as, but not limited to, paint brushes, hand rollers, caulking guns, trowels, spatulas, syringe daubers, rags and sponges, and equipment used in mechanically operated application methods, including, but not limited to spray guns, spinning disks, and pressure pots.~~

(2) **"Binder"** means ~~any~~ non-volatile polymeric organic material, such as a resin, which forms ~~the~~ a surface film during coating applications.

(3) **"Clear Topcoat"** means a ~~any~~ final coating which contains binders, but not opaque pigments, and ~~which~~ is specifically formulated to form a transparent or translucent solid protective film. Clear topcoats include clear lacquers and varnishes.

(4) **"Coating"** means a material containing more than 20 grams per liter of VOC as applied, less water and exempt compounds, which can be applied as a thin layer to a substrate, and which dries or cures to form a continuous solid film, including but not limited to any paint, ink, sealer, varnish, or lacquer, and excluding any adhesives. Coating also includes stains, inks, fillers, washcoats, and toners.

(5) **"Coating Operation"** means all steps involved in the application, drying and/or curing of surface coatings, including touch-up operations, and associated stripping, surface preparation and coating application equipment cleaning.

(6) **"Conversion Varnish"** means a topcoat which is comprised of a homogeneous transparent or translucent liquid (alkyd-amino resin), which when acid catalyzed and applied, hardens by evaporation and polymerization.

~~(6)~~(7) **"Dip Coat"** means a coating application method accomplished by dipping an object into the coating material.

~~(7)~~(8) **"Electrostatic Spray"** means a coating application method accomplished by charging atomized paint particles for deposition by electrostatic attraction.

~~(4)~~(9) **"Exempt Compound"** means any of ~~the following compounds or classes of compounds~~:

(i) the following compounds:

1,1,1-trichloroethane,

methylene chloride, (dichloromethane),

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),

(ii) the following linear volatile methyl siloxane (VMS) compounds:
hexamethyldisiloxane (MM),
octamethyltrisiloxane (MDM),
decamethyltetrasiloxane (MD_2M),
dodecamethylpentasiloxane (MD_3M),
tetradecamethylhexasiloxane (MD_4M),
dimethyl silicones and siloxanes (MD_xM),

(iii) the following cyclic volatile methyl siloxane (VMS) compounds:
hexamethylcyclotrisiloxane (D_3),
octamethylcyclotetrasiloxane (D_4),
decamethylcyclopentasiloxane (D_5),
dodecamethylcyclohexasiloxane (D_6),
cyclopolydimethylsiloxanes (D_x),

(iv) the following branched volatile methyl siloxane (VMS) compounds:
1,1,1,3,5,5,5-heptamethyl-3-[(trimethylsilyl)oxyl]-trisiloxane (M_3T),
1,1,1,5,5,5-hexamethyl-3,3,bis[(trimethylsilyl)oxyl-trisiloxane (M_4Q),
pentamethyl[(trimethylsilyl)oxylcyclotrisiloxane (MD_3),

(v) 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 sulfurbonds only to carbon and fluorine.

~~1,1,1-trichloroethane, methylene chloride, trichlorofluoromethane (CFC-11), dichlorodifluoromethane (CFC-12), trifluoromethane (FC-23), trichlorotrifluoroethane (CFC-113), dichlorotetrafluoroethane (CFC-114), chloropentafluoroethane (CFC-115), chlorodifluoromethane (CFC-22), dichlorotrifluoroethane (HCFC-123), dichlorofluoroethane (HCFC-141b), tetrafluoroethane (HFC-134a), and chlorodifluoroethane (HCFC-142b).~~

~~(9)~~(10) **"Filler"** means a material used to fill in cracks, grains and imperfections of wood before applying a coating.

~~(10)~~(11) **"Flow Coat"** means a coating application method accomplished by flowing a stream of coating over an object.

~~(5)~~(12) **"Glaze Stain"** means a semitransparent tinted coating applied on a previously coated surface to produce a decorative effect.

~~(12)~~(13) **"Hand Application Method"** means a coating application method accomplished by applying a coating by manually held, non-mechanically operated equipment. Such equipment includes paint brushes, hand rollers, rags and sponges.

~~(6)~~(14) **"High-Solids Stain"** means a stain containing more than one pound of solids per gallon ~~and includes wiping stains, glazes and opaque stains~~.

~~(7)~~(15) **"High-Volume Low-Pressure (HVLP) Spray"** means a coating application method which uses ~~using~~ pressurized air at a permanent pressure between 0.1 and 10.0 psig, not to exceed 10.0 psig, measured at the air cap of the coating application system~~, and a permanent liquid coating pressure of not more than 50 psig~~.

~~(15)~~(16) **"Ink"** means a liquid that contains dyes and/or colorants and is used to make markings, but not to protect surfaces.

~~(16)~~(17) **"Low-Solids Coating"** means a coating containing one pound of solids per gallon, or less.

~~(8)~~(18) **"Low-Solids Stain"** means a stain containing one pound of solids per gallon, or less.

(19) **"Medium Density Fiberboard (MDF) Coating"** means the initial coating which is applied directly to the surface of MDF, which is a wood product composed of tightly compressed wood fibers bonded with resins, and has a density greater than 45 pounds per cubic foot.

~~(9)~~(20) **"Multi-Colored Coating"** means a coating which exhibits more than one color when applied and which is packaged in a single container and applied in a single coat.

~~(10) "Opaque Stain" means any stain which is used to give character or texture to wood, and which contains pigments not classified as semi-transparent.~~

~~(19)~~(21) **"New Wood Product"** means a wood product which has not been previously coated. A wood product from which coatings have been removed to repair flaws in initial coating applications is a new wood product.

~~(11)~~(22) **"Pigmented Coating"** means an ~~any~~ opaque coating containing binders and colored pigments, and formulated to hide the wood surfaces.

~~(21)~~(23) **"Refinished Wood Product"** means a post-consumer wood product which has had some or all of the coatings removed, and to which new coatings are applied in order to preserve or restore the post-consumer wood product to its original condition. A wood product from which coatings have been removed to repair flaws in initial coatings applications is not a refinished wood product.

~~(22)~~(24) **"Roll Coat"** means a coating application method accomplished by rolling a coating onto a flat surface using a roll applicator.

~~(12)~~(25) **"Sealer"** means a ~~any~~ coating which contains binders and which seals wood surfaces prior to the application of subsequent coatings.

~~(13) "Semi-transparent Stain" means a solution of coloring matter which contains dyes and/or semi-transparent pigments and which is formulated to change surface color but not to conceal surface grain. These include sap stain and non-grain raising stain.~~

~~(24)~~(26) **"Stationary Source"** means the same as defined in Rule 20.1.

~~(14)~~(27) **"Stripper"** means a liquid applied to remove a coating or coating residue.

~~(15)~~(28) **"Toner"** means a ~~any~~ coating which contains not more than one pound of binders and dyes or pigments and which is used to add tint to a coated surface.

~~(27)~~(29) **"Touch-up Operation"** means the portion of a coating operation which is incidental to the main coating process but necessary to cover minor imperfections or minor mechanical damage incurred prior to intended use, or to achieve coverage as required.

~~(16)~~(30) **"Transfer Efficiency"** means the ratio of the weight of coating solids adhering to the part being coated to the weight of coating solids used in the application process a ~~coating operation,~~ expressed as a percentage.

~~(20)~~(31) **"Volatile Organic Compound" (VOC)** means any volatile compound of carbon, which may be emitted to the atmosphere during operations or activities subject to this rule, except ~~containing at least one atom of carbon excluding~~ methane, carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates, ammonium carbonates, and exempt compounds.

~~which may be emitted to the atmosphere during application of and/or subsequent drying or curing of coatings subject to this rule. VOC limits of coatings and strippers are expressed in grams of VOC per liter of coating or stripper as applied, minus water and minus exempt compounds. VOC limits of low-solid stains, toners, washcoats and cleaning materials are expressed in grams of VOC per liter of material.~~

~~(30)~~(32) **"VOC Content Per Volume of Coatings, Less Water and Exempt Compounds"** means the weight of VOC per combined volume of VOC and coating solids and is calculated by the following equation:

$$C_{cvoc} = (W_s - W_w - W_{es}) / (V_m - V_w - V_{es})$$

where:

C_{cvoc} = VOC content per volume of coating, less water and exempt compounds

W_s = weight of volatile compounds including water and exempt compounds

W_w = weight of water

W_{es} = weight of exempt compounds

V_m = volume of material including water and exempt compounds

V_w = volume of water

V_{es} = volume of exempt compounds

~~(31)~~(33) **"VOC Content Per Volume of Material"** means the weight of VOC per volume of material and is calculated by the following equation:

$$C_{mvoc} = (W_s - W_w - W_{es}) / V_m$$

where:

C_{mvoc} = VOC content per volume of material

W_s = weight of volatile compounds including water and exempt compounds

W_w = weight of water

W_{es} = weight of exempt compounds

V_m = volume of material including water and exempt compounds

~~(17)~~(34) **"Wash Coat"** means a coating containing ~~that contains~~ not more than ~~1.0~~ one pounds of solids per gallon, which is used to seal wood surfaces, prevents undesired staining and ~~which~~ controls penetration. A wash coat may also be used to provide a barrier coat when paper laminates are applied to the wood surface, or when glazes are applied during the coating operation.

~~(18) "Wood Products" means any furnishings, including tables, chairs, beds, sofas, shutters and cabinets which are not permanently attached to stationary structures at the time of coating, art objects, and any other objects made of solid wood, wood composition, bamboo and/or rattan, or which are primarily fabricated with such materials.~~

~~(33)~~(35) **"Wood Products"** means any objects that are made of or primarily fabricated with solid wood, wood composition, bamboo and/or rattan, including furnishings, art objects, tables, chairs, beds, sofas, and shutters and cabinets which are not permanently attached to stationary structures at the time of coating.

~~(19) "Wood Products Coating Operation" means the application of coating materials to wood products and includes coating application equipment, flash-off area, spray booths, dip tanks, ovens, conveyors and/or other equipment operated for the purpose of applying and drying or curing wood products coating materials.~~

(d) **STANDARDS**

(1) Application Equipment

Except as provided in Subsection (b)(2), no coatings shall be applied unless one of the following application methods is used: ~~Any person applying coatings to wood products shall use one of the following application methods:~~

(i) Hand application methods ~~Brush coat~~, or

(ii) Dip coat, or

(iii) Roller coat, or

(iv) Flow coat ~~Wiping~~, or

(v) Electrostatic ~~coat~~ spray, or

(vi) High-volume low-pressure (HVLP) ~~coat~~ spray, or

(vii) Other coating application methods that are demonstrated to ~~achieve as a minimum 65 percent transfer efficiency or~~ have a transfer efficiency at least equal to one of the above application methods, and which are ~~operated~~ used in such a manner that the parameters under which they were tested are permanent features of the method~~;~~ . Such coating application methods shall be ~~and are~~ approved in writing by the Air Pollution Control Officer prior to use. ~~, California Air Resources Board and Environmental Protection Agency.~~

~~The provisions of Subsection (d)(1) shall not apply to coatings that are applied by the use of air brushes with a coating capacity of two ounces (59.1 ml) or less through a template to add designs, letters and/or numbers to the wood products.~~

(2) VOC Limits for New Wood Products ~~Content of Coatings and Strippers.~~

~~(i) A person shall not apply any coatings or strippers subject to this rule which, as applied, contain VOC in excess of the following:~~

~~CATEGORY~~	~~VOC LIMIT (grams per liter of coating or stripper, as applied, less water and exempt compounds)~~
~~Clear Topcoats~~	~~700~~
~~High-Solids Glaze Stains~~	~~700~~
~~High-Solids Non-Glaze Stains~~	~~800~~
~~Multi-Colored Coatings~~	~~685~~
~~Pigmented Coatings~~	~~700~~
~~Sealers~~	~~700~~
~~Strippers~~	~~800~~

~~CATEGORY~~	~~VOC LIMIT (grams per liter of material as applied)~~
~~Low-Solids Stains, Toners and Washcoats~~	~~800~~

~~(ii)~~(i) Except as provided in Subsection (d)(2)(ii), ~~On~~ on and after (*date of adoption*) ~~the following dates~~, a person shall not apply any coatings to a new wood product ~~or strippers subject to this rule~~ with a ~~which contain~~ VOC content in excess of the following limits expressed as grams of VOC per liter of coating, as applied, excluding water and exempt compounds:

CATEGORY	VOC LIMIT
Clear Topcoats	680
Fillers	500
High-Solids Stains	700
Inks	500
Medium Density Fiberboard (MDF) Coatings	680
Multi-Colored Coatings	685
Pigmented Coatings	600
Sealers	680
Any Other Coating	420

~~CATEGORY~~	~~VOC LIMIT (grams per liter of coating or stripper, as applied, less water and exempt compounds)~~	
	~~Effective 12/31/90~~	~~Effective 1/1/95~~
~~Clear Topcoats~~	~~550~~	~~275~~
~~High-Solids Glaze Stains~~	~~700~~	~~700~~
~~High-Solids Non-Glaze Stains~~	~~700~~	~~700~~
~~Multi-Colored Coatings~~	~~685~~	~~275~~
~~Pigmented Coatings~~	~~600~~	~~275~~
~~Sealers~~	~~550~~	~~550~~
~~Strippers~~	~~350~~	~~350~~
~~Any Other Coating~~	~~420~~	~~275~~

(ii) On and after (*date of adoption*), a person shall not apply the following low-solids coatings to a new wood product with a VOC content in excess of the following limit expressed as grams of VOC per liter of material, as applied:

CATEGORY	VOC LIMIT
Low-Solids Stains, Toners or Wash Coats	700

~~CATEGORY~~	~~VOC LIMIT (grams per liter of material as applied)~~	
	~~Effective 12/31/90~~	~~Effective 1/1/95~~
~~Low-Solids Stains, Toners and Washcoats~~	~~480~~	~~480~~

(iii) Except as provided in Subsection (d)(2)(iv), on and after July 1, 1997, a person shall not apply any coating to a new wood product with a VOC content in excess of the following limits expressed as grams of VOC per liter of coating, as applied, excluding water and exempt compounds;

CATEGORY	VOC LIMIT
Clear Topcoats	275
Conversion Varnishes	550
Fillers	500
High-Solids Stains	550
Inks	500
Medium Density Fiberboard (MDF) Coatings	550
Multi-Colored Coatings	685
Pigmented Coatings	275
Sealers	550
Any Other Coating	275

(iv) On and after July 1, 1997, a person shall not apply the following low-solids coatings to a new wood product with a VOC content in excess of the following limit expressed as grams of VOC per liter of material, as applied:

CATEGORY	VOC LIMIT
Low-Solids Stains, Toners or Wash Coats	480

The requirements of Subsection (d)(2) may be met using an Alternative Emission Control Plan (AECP) that has been approved pursuant to Rule 67.1.

(3) VOC Limits for Refinished Wood Products

(i) Except as provided in Subsection (d)(3)(ii), on and after (*date of adoption*), a person shall not apply any coating to a refinished wood product with a VOC content in excess of the following limits expressed as grams of VOC per liter of coating, as applied, excluding water and exempt compounds:

CATEGORY	VOC LIMIT
Clear Topcoats	680
Fillers	500
High-Solids Stains	700
Inks	500
Medium Density Fiberboard (MDF) Coatings	680
Multi-Colored Coatings	685
Pigmented Coatings	600
Sealers	680
Any Other Coating	420

(ii) On and after (*date of adoption*), a person shall not apply the following low-solids coatings to a refinished wood product with a VOC content in excess of the following limit expressed as grams of VOC per liter of material, as applied:

CATEGORY	VOC LIMIT
Low-Solids Stains, Toners or Wash Coats	700

The requirements of Subsection (d)(3) may be met using an Alternative Emission Control Plan (AECP) that has been approved pursuant to Rule 67.1.

~~(3)~~(4) Surface Preparation and Stripping Materials~~:~~

Except as provided in subsection (d)(5), a person shall not use VOC containing materials for surface preparation or stripping unless:

(i) The material contains 200 grams or less of VOC per liter of material; or

(ii) The material has an initial boiling point of 190° C (374° F) or greater; or

(iii) The material has a total VOC vapor pressure of 20 mm Hg or less, at 20° C (68° F).

~~(i) A person shall not use VOC containing materials which have a VOC content of more than 200 grams per liter of material for surface preparation excluding cleaning of coating application equipment; or~~

~~(ii) A person shall not use a VOC containing material which has a composite vapor pressure greater than 45 mm Hg at a temperature 20°C (68°F) for surface preparation, excluding cleaning of coating application equipment. After January 1, 1992, the VOC content of such material shall not be greater than 200 grams per liter regardless of the vapor pressure of the material.~~

~~(4)~~(5) Cleaning ~~up~~ of Application Equipment

~~Effective May 1, 1991, a~~ A person shall not use VOC containing materials for the cleaning ~~up~~ of application equipment used in ~~coating~~ operations subject to this rule unless:

(i) The cleaning material contains 200 grams or less of VOC per liter of material; or

(ii) The cleaning material has an initial boiling point of 190° C (374° F) or greater; or

(iii) The cleaning material has a total VOC vapor pressure of 20 mm Hg or less, at 20° C (68° F); or

(iv) The cleaning material is flushed or rinsed through the application equipment in a contained manner that will minimize evaporation into the atmosphere; or

(v) The application equipment or equipment parts are cleaned in a container which is open only when being accessed for adding, cleaning, or removing application equipment or when cleaning material is being added, provided the cleaned equipment or equipment parts are drained to the container until dripping ceases; or

~~(i)~~(vi) A system is used that totally encloses the component parts being cleaned during the washing, rinsing, and draining processes; or

(vii) Other application equipment cleaning methods that are demonstrated to be as effective as any of the equipment described above in minimizing the emissions of VOC to the atmosphere, provided that the device has been tested and approved by the Air Pollution Control Officer prior to use.

~~(ii) The cleaning solvent is transferred through the application equipment, without exposure to air, into a container which has in place an apparatus or cover which completely covers the container and has no visible holes, breaks, openings or separations between adjoining components of the container or container cover; or~~

~~(iii) The cleaning solvent has a VOC content of less than 200 grams per liter.~~

(6) No person shall require for use or specify the application of a coating subject to this rule if such use or application results in a violation of this rule. This prohibition shall apply to all written or oral contracts under the terms of which any coating is applied to any wood product at any location within San Diego County.

(7) Spray application equipment shall not be used to dispose of waste coatings or solvents into the air.

~~(5) A person shall not sell, offer for sale, or apply any coating or cleaning solvent for use in wood products coating operations that, after December 18, 1990 was newly formulated to contain or reformulated to increase the content of methylene chloride, trichlorofluoromethane (CFC-11), dichlorodifluoromethane (CFC-12), trichlorotrifluoroethane (CFC-113), dichlorotetrafluoroethane (CFC-114), or chloropentafluoroethane (CFC-115).~~

~~(6) After December 18, 1990 a person shall not manufacture, sell, offer for sale, or supply any coating or cleaning material for use in wood products coating operations unless the coating or cleaning material container displays the content of methylene chloride, trichlorofluoromethane (CFC-11), dichlorodifluoromethane (CFC-12), trichlorotrifluoroethane (CFC-113), dichlorotetrafluoroethane (CFC-114), or chloropentafluoroethane (CFC-115).~~

(e) CONTROL EQUIPMENT

(1) In lieu of complying with the provisions of Subsections (d)(2), (d)(3), (d)(4) and/or (d)(5) of this rule, a person may use an air pollution control system which:

~~Any person subject to this rule can comply with the provisions of Subsection (d)(2) by using air pollution control equipment which has been approved in writing by the Air Pollution Control Officer provided that the VOC emissions from such operations are reduced such that:~~

(i) ~~The air pollution control equipment has~~ Has been installed in accordance with an Authority to Construct~~:~~ ; and

~~(iii)~~(ii) Includes an ~~The~~ emission collection system which captures organic gaseous emissions, including emissions associated with applicable coating, equipment cleaning, and surface preparation operations, and transports the captured emissions to

an ~~the~~ air pollution control device; and ~~collects at least 90 percent by weight of the emissions generated by the coating operation, including all VOC emissions from applied coatings.~~

~~(ii)~~(iii) Has a combined emissions capture and control device efficiency of at least 85 percent by weight. ~~The control device reduces VOC emissions, by at least 95 percent by weight; and~~

(2) A person electing to use ~~comply with the provisions of Subsection (d)(2) by using air pollution~~ control equipment pursuant to Section (e)(1) shall submit to the Air Pollution Control Officer for approval an Operation and Maintenance ~~Plan~~ plan for the ~~VOC~~ proposed emission ~~air pollution~~ control device and emission collection system and receive approval prior to 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 Subsections ~~(e)(1)(ii) and~~ (e)(1)(iii), such as temperature, pressure, and/or flow rate; and ~~of this section.~~

(ii) Include proposed inspection schedules, anticipated ongoing maintenance, and proposed recordkeeping practices regarding the key system operating parameters.

(3) ~~The Operation and Maintenance Plan must be submitted to the Air Pollution Control Officer and receive approval prior to operation of the air pollution control equipment.~~ Upon approval of the Air Pollution Control Officer, a ~~A~~ person subject to the requirements of ~~this section~~ Section (e) shall implement the ~~plan on the approval of the Air Pollution Control Officer~~ Operation and Maintenance plan and shall comply with the provisions of the approved plan thereafter.

(f) RECORDKEEPING

All records shall be retained on-site for at least three years and shall be made available to the District upon request.

~~Effective December 18, 1990, any person applying coatings and/or solvents to wood products shall maintain records in accordance with the following requirements:~~

(1) Any person subject to the provisions of Subsections (d)(2), (d)(3), (d)(4) and/or (d)(5) of this rule shall maintain records in accordance with the following:

~~(1)~~(i) Maintain a current list of coatings, strippers, ~~thinners~~, surface preparation and cleaning materials in use which provides all of the VOC data necessary to evaluate compliance, including, but not limited to:

~~(i)~~(A) manufacturer name and identification for each ~~Type and/or category of~~ coating or coating component for multi-component coatings, (this includes any components such as bases, catalysts, thinners or reducers, when supplied in separate containers), stripper, ~~thinner,~~ surface preparation ~~or~~ and cleaning material ~~used~~; and

~~(ii)~~(B) ~~Mix~~ mix ratio of components; and

~~(iii)~~(C) VOC content, vapor pressure and/or initial boiling point, as applicable, for ~~of~~ each coating, or coating component for multi-component coatings, stripper, ~~thinner,~~ surface preparation and cleaning material~~, as applied~~.

(ii) Maintain current documentation to demonstrate applicability of any coating category pursuant to Subsection (d)(2) or (d)(3) of this rule.

~~(2)~~(iii) Maintain daily or monthly records ~~showing~~ of the amount of each coating or each coating component for multi-component coatings used. ~~, stripper, thinner, cleaning and surface preparation material used.~~

(iv) Maintain daily or monthly records of the amount of each stripper, surface preparation and cleaning material used.

(v) Maintain records of the dates and amounts of material added to coating dip tanks.

~~These records shall be retained for at least three years and shall be made available to the District immediately upon request.~~

~~(3) Maintain records of content of methylene chloride, trichlorofluoromethane (CFC-11), dichlorodifluoromethane (CFC-12), trichlorotrifluoroethane (CFC-113), dichlorotetrafluoroethane (CFC-114), or chloropentafluoroethane (CFC-115) in any coating or cleaning material used.~~

(2) Any person using control equipment pursuant to Section (e) of this rule shall:

(i) Maintain records in accordance with Subsection (f)(1); and

(ii) For all coatings, strippers, surface preparation and/or cleaning materials not in compliance with Subsections (d)(2), (d)(3), (d)(4) or (d)(5) of this rule, maintain daily records of the amount of each coating or each coating component for multi-component coatings, stripper, surface preparation and cleaning material used; and

(iii) Maintain daily records of key system operating parameters as approved in the Operation and Maintenance plan. Such records shall be sufficient to document continuous compliance with Subsection (e)(1)(iii) during periods of emission producing activities.

(g) TEST METHODS

(1) Perfluorocarbon (PFC) compounds shall be assumed to be absent from a coating, cleaning, or surface preparation material subject to this rule unless a manufacturer of the material or a facility operator identifies the specific individual compound(s) and the amount(s) present in the material and provides an EPA and ARB approved test method which can be used to quantify the specific compounds.

(2) Measurements of transfer efficiency subject to Subsection (d)(1)(vii) of this rule shall be conducted in accordance with the South Coast Air Quality Management District's "Spray Equipment Transfer Efficiency Test Procedure for Equipment User" as it exists on *(date of adoption)*.

(3) Measurement of the VOC content of coatings, surface preparation and cleaning materials subject to Subsections (d)(2), (d)(3), (d)(4)(i), or (d)(5)(i) of this rule

shall be conducted in accordance with EPA Test Method 24 (40 CFR 60, Appendix A) as it exists on *(date of adoption)*.

(4) Measurement of the VOC content of ultraviolet radiation-cured coatings subject to Subsections (d)(2) and/or (d)(3) of this rule shall be conducted in accordance with ASTM Standard Test Method D5403-93. Measurement of the water content and exempt solvent content, if applicable, shall be conducted and reported in accordance with ASTM Standard Test Methods D 3792-91 and D 4457-85.

(5) Measurement of the initial boiling point of cleaning and surface preparation materials subject to Subsection (d)(4)(ii) and/or (d)(5)(ii) of this rule shall be conducted in accordance with ASTM Standard Test Method D1078-86 for distillation range of volatile organic liquids.

(6) Calculation of total VOC vapor pressure for materials subject to Subsection (d)(4)(iii) and/or (d)(5)(iii) of this rule shall be conducted in accordance with the District's "Procedures for Estimating the Vapor Pressure of VOC Mixtures" as it exists on *(date of adoption)*. If the vapor pressure of the liquid mixture, as calculated by this procedure, exceeds the limits specified in Subsection (d)(4)(iii) and/or (d)(5)(iii), the vapor pressure shall be determined in accordance with ASTM Standard Test Method D2879-86. The solvent composition shall be determined using one of the following ASTM standard recommended practices: E168-92, E169-93 or E260-91. The fraction of water and exempt compounds in the liquid phase shall be determined by using ASTM Standard Test Methods D3792-91 and D4457-85 and shall be used to calculate the partial pressure of water and exempt compounds. The results of vapor pressure measurements obtained using ASTM Test Method D2879-86 shall be corrected for partial pressure of water and exempt compounds.

(7) Measurement of solvent losses from alternative application cleaning equipment subject to Subsection (d)(5)(vii) shall be conducted and reported in accordance with the South Coast Air Quality Management District's "General Test Method for Determining Solvent Losses from Spray Gun Cleaning Systems" as it exists on *(date of adoption)*.

(8) Measurement of control device efficiency subject to Subsection (e)(1) of this rule shall be conducted in accordance with EPA Methods 18 and/or 25A (40 CFR 60) as they exist on *(date of adoption)* and in accordance with a protocol approved by the Air Pollution Control Officer.

(9) Measurement of the emission collection system capture efficiency subject to Subsection (e)(1) of this rule shall be determined according to EPA's technical document, "Guidelines for Determining Capture Efficiency," dated January 9, 1995, using a protocol approved by the Air Pollution Control Officer. Subsequent to the initial compliance demonstration period, applicable key system operating parameters, as approved by the Air Pollution Control Officer, may be used as verification that capture efficiency has not diminished.

~~Measurements of VOC content subject to Section (d) of this rule shall be conducted and reported in accordance with EPA Test Method 24 (40 CFR 60, Appendix A) as it exists on December 18, 1990, and ASTM Test Method D 4457-85 for determination of dichloromethane and 1,1,1-trichloroethane in paints and coatings by direct injection into a gas chromatograph. Measurements of VOC content of multicomponent coatings shall be performed in accordance with ASTM Test Method D 2369-87 with minor modifications outlined in the Federal Register 55 FR 36546, published on September 5, 1990.~~

~~Calculations of the VOC content of coatings and strippers less water and less exempt compounds shall be performed in accordance with ASTM Standard Practice D 3960-87 for determining VOC content of paints and related coatings.~~

~~Measurements of VOC emissions subject to Section (e) of this rule shall be conducted in accordance with EPA Methods 18 and 25 (40 CFR 60, Appendix A) as they exist on December 18, 1990 and with EPA Guidelines for Determination of Capture Efficiency.~~

~~Measurements of transfer efficiency pursuant to Subsection (d)(1)(vii) of this rule shall be conducted in accordance with the current version of the South Coast Air Quality Management District's "Spray Equipment Transfer Efficiency Test Procedure for Equipment User".~~

~~Total absolute vapor pressure of VOC containing compounds pursuant to Subsection (d)(3)(ii) of this rule shall be calculated using the District's "Procedure for Estimating the Vapor Pressure of a Solvent Mixture", as it exists on December 18, 1990. If the vapor pressure of the liquid mixture is in excess of the limit specified in Subsection (d)(3)(ii), the vapor pressure shall be determined in accordance with ASTM Test Method D 2879-83, Vapor Pressure-Temperature Relationship and Initial Decomposition Temperature of Liquids by Isoteniscope.~~

05/9/95

AIR POLLUTION CONTROL DISTRICT
COUNTY OF SAN DIEGO

May 1, 1995

NEGATIVE DECLARATION

1. Project Name:

Adoption of amended Rule 67.11, Wood Products Coating Operations, in the San Diego County Air Pollution Control District Rules & Regulations.

2. Project Applicant:

San Diego County Air Pollution Control District
9150 Chesapeake Drive
San Diego, California 92123-1095

3. Project Location:

Entire area within the boundaries of San Diego County. San Diego County is the southwestern most county in California.

4. Project Description:

The District has proposed adopting an amended version of existing Rule 67.11, Wood Products Coating Operations, which will delay for two years the implementation of technology-forcing lower Volatile Organic Compound (VOC) limits for four types of wood coatings: clear topcoats, multi-colored, pigmented and non-specialty coatings. The amendments will also temporarily relax the VOC emission limits for three types of wood coatings: clear topcoats, sealers and low-solids coatings.

5. Finding:

The District has determined that there is no reasonable possibility that any potential increase in VOC emissions due to this project may result in a significant impact upon the environment. Therefore, as proposed, the District will adopt the emission standards reflecting higher VOC limits in Rule 67.11.

Note: This action becomes final upon approval by the Air Pollution Control Board.

INITIAL STUDY

San Diego Air Pollution Control District

Adoption of Amended Rule 67.11
Wood Products Coating Operations

May, 1995

Prepared by
Laura Yannayon

San Diego Air Pollution Control District
9150 Chesapeake Drive
San Diego, CA 92123-1096

CONTENTS

I. INTRODUCTION

1. Project Name:

Adoption of amended Rule 67.11, Wood Products Coating Operations, in the San Diego County Air Pollution Control District Rules & Regulations.

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Entire area within the boundaries of San Diego County. San Diego County is the southwestern most county in California.

II. PROJECT DESCRIPTION

The District has proposed adopting an amended version of existing Rule 67.11, Wood Products Coating Operations, which will delay for two years the implementation of technology-forcing lower Volatile Organic Compound (VOC) limits for four types of wood coatings: clear topcoats, multi-colored, pigmented and non-specialty coatings. The delay is necessary since acceptable complying coatings are not available for all applications. The delay will not significantly increase emissions since the use of complying coatings has been extremely limited.

The amendments will also temporarily relax the VOC emission limits for three types of wood coatings: clear topcoats, sealers and low-solids coatings. Coatings currently complying with the emission limits contain 1,1,1-trichloroethane (TCA), an exempt solvent not contributing to ground level ozone. However, TCA is a stratospheric ozone depleting compound, and its production is being phased out pursuant to the Montreal Protocol, a treaty to protect stratospheric ozone. The federal Clean Air Act has also identified TCA as a hazardous air pollutant. Since TCA is no longer acceptable as a coating solvent, the District is relaxing the VOC limits for the above three coatings to allow the use of coatings not containing TCA.

Based on the maximum allowable usage for these coatings, which is considered a worst case estimate, the proposed amendments may result in a short-term increase of approximately 0.3 tons per day of VOC emissions. Compared to the total VOC emissions projected for 1996, this represents a 0.13% increase. This slight increase in VOC emissions does not interfere with achieving the 15% VOC reduction required by the 1996 by the federal Clean Air Act, or the 3% annual reductions required annually thereafter through 1999. The slight increase will also not interfere with the projected attainment of the federal ozone standard in 1999. Because federal emission reduction and attainment demonstration mandates continue to be met, and the revised emission limits will allow reduced emissions of a hazardous air pollutant from wood coating operations, the District has determined that there is no reasonable possibility that the potential increase in VOC emissions due to this project may result in a significant impact upon the environment.

A copy of the proposed amendments to Rule 67.11 is attached.

III. ENVIRONMENTAL CHECKLIST

	YES	MAYBE	NO
1. **Earth.** Will the proposal result in:			
a. Unstable earth conditions or in changes in geologic substructure?	____	____	x
b. Disruptions, displacements, compaction or overcovering of the soil?	____	____	x
c. Change in topography or ground surface relief features?	____	____	x
d. The destruction, covering or modification of any unique geologic or physical features?	____	____	x
e. Any increase in wind or water erosion of soils, either on or off the site?	____	____	x
f. Changes in deposition or erosion of beach sands, or changes in siltation, deposition or erosion which may modify the channel of a river or stream or the bed of the ocean or any bay, inlet or lake?	____	____	x
g. Exposure of people or property to geologic hazards such as earthquakes, landslides, mudslides, ground failure, or similar hazards?	____	____	x
2. **Air.** Will the proposal result in:			
a. Significant air emissions for some air contaminants?	____	____	x
b. The creation of objectionable odors?	____	____	x
c. Alteration of air movement, moisture, or temperature, or any change in climate, either locally or regionally?	____	____	x
3. **Water.** Will the proposal result in:			
a. Changes in currents, or the course of direction of water movements, in either marine or fresh waters?	____	____	x
b. Changes in absorption rates, drainage patterns, or the rate and amount of surface runoff?	____	____	x
c. Alterations to the course or flow of flood waters?	____	____	x

	YES	MAYBE	NO
d. Change in the amount of surface water in any water body?	____	____	x
e. Discharge into surface waters, or any alteration of surface water quality, including but not limited to temperature, dissolved oxygen, or turbidity?	____	____	x
f. Alteration of the direction or rate of flow of ground water?	____	____	x
g. Change in the quantity of ground waters, either through direct additions or withdrawals, or through interception of an aquifer by cuts or excavations?	____	____	x
h. Substantial reduction in the amount of water otherwise available for public water supplies?	____	____	x
i. Exposure of people or property to water related hazards such as flooding or tidal waves?	____	____	x
4. **Plant Life.** Will the proposal result in:			
a. Change in the diversity of species, or number of any species of plants (including trees, shrubs, grass, crops, and aquatic plants)?	____	____	x
b. Reduction of the numbers of any unique, rare or endangered species of plants?	____	____	x
c. Introduction of new species of plants into an area, or in a barrier to the normal replenishment of existing species?	____	____	x
d. Reduction in acreage of any agricultural crop?	____	____	x
5. **Animal Life.** Will the proposal result in:			
a. Change in the diversity of species, or numbers of any species of animals (birds, land animals including reptiles, fish and shellfish, benthic organisms or insects)?	____	____	x
b. Reduction of the numbers of any unique, rare or endangered species or animals?	____	____	x
c. Introduction of new species of animals into an area, or result in a barrier to the migration or movement of animals?	____	____	x
d. Deterioration to existing fish or wildlife habitat?	____	____	x

	YES	MAYBE	NO
6. **Noise.** Will the proposal result in:			
a. Increases in existing noise levels?	____	____	x
b. Exposure of people to severe noise levels?	____	____	x
7. **Light and Glare.** Will the proposal produce new light and glare?	____	____	x
8. **Land Use.** Will the proposal result in a substantial alteration of the present or planned land use of an area?	____	____	x
9. **Natural Resources.** Will the proposal result in increases in the rate of use of any natural resource?	____	____	x
10. **Risk of Upset.** Will the proposal involve:			
a. A risk of an explosion or the release of hazardous substances (including, but not limited to oil, pesticides, chemicals or radiation) in the event of an accident or upset conditions?	____	____	x
b. Possible interference with an emergency response plan or an emergency evacuation plan?	____	____	x
11. **Population.** Will the proposal alter the location, distribution, density, or growth rate of the human population of an area?	____	____	x
12. **Housing.** Will the proposal affect existing housing, or create a demand for addition housing?	____	____	x
13. **Transportation/Circulation.** Will the proposal result in:			
a. Generation of substantial additional vehicular movement?	____	____	x
b. Effects on existing parking facilities, or demand for new parking?	____	____	x
c. Substantial impact upon existing transportation systems?	____	____	x
d. Alterations to present patterns of circulation or movement of people and/or goods?	____	____	x

	YES	MAYBE	NO
e. Alterations to waterborne, rail or air traffic?	____	____	x
f. Increase in traffic hazards to motor vehicles, bicyclists or pedestrians?	____	____	x
14. **Public Services.** Will the proposal have an effect upon, or result in a need for, new or altered governmental services in any of the following areas:			
a. Fire protection?	____	____	x
b. Police protection?	____	____	x
c. Schools?	____	____	x
d. Parks or other recreational facilities?	____	____	x
e. Maintenance of public facilities, including roads?	____	____	x
f. Other government services?	____	____	x
15. **Energy.** Will the proposal result in:			
a. Use of substantial amounts of fuel or energy?	____	____	x
b. Substantial increase in demand upon existing sources of energy, or require the development of new sources of energy?	____	____	x
16. **Utilities.** Will the proposal result in a need for new systems, or substantial alterations to existing utilities?	____	____	x
17. **Human Health.** Will the proposal result in:			
a. Creation of any health hazard or potential health hazard (excluding mental health)?	____	____	x
b. Exposure of people to potential health hazards?	____	____	x
18. **Aesthetics.** Will the proposal result in the obstruction of any scenic vista or view open to the public, or will the proposal result in the creation of an aesthetically offensive site open to public view?	____	____	x

	YES	MAYBE	NO
19. **Recreation.** Will the proposal result in an impact upon the quality or quantity of existing recreational opportunities?	____	____	x
20. **Cultural Resources.** Will the proposal:			
a. Result in the alteration of or the destruction of a prehistoric or historic archaeological site?	____	____	x
b. Result in adverse physical or aesthetic effects to a prehistoric or historic building, structure, or object?	____	____	x
c. Have the potential to cause a physical change which would affect unique ethnic cultural values?	____	____	x
d. Restrict existing religious or sacred uses within the potential impact area?	____	____	x
21. **Mandatory Findings of Significance.** Does the project have:			
a. The potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory?	____	____	x
b. The potential to achieve short-term, to the disadvantage of long-term, environmental goals? (A short-term impact on the environment is one which occurs in a relatively brief, definitive period of time while long-term impacts will endure well into the future.)	____	____	x
c. Impacts which are individually limited, but cumulatively considerable? (A project may impact on two or more separate resources where the impact on each resource is relatively small, but where the effect of the total of those impacts on the environment is significant.)	____	____	x
d. Environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	____	____	x

IV. DETERMINATION OF CONSISTENCY WITH EXISTING ZONING, PLANS, AND LAND-USE CONTROLS

Adoption of Rule 67.11 will be consistent with existing zoning, plans, and other applicable land use controls.

V. DETERMINATION OF DEPARTMENT OF FISH & GAME DE MINIMIS IMPACT FINDING

Based on the information contained in the environmental checklist of this Initial Study, there is no evidence before the San Diego County Air Pollution Control District that adoption of amended Rule 67.11 will have any potential for adverse effect on wildlife resources or the habitat upon which the wildlife depends; and,

The San Diego County Air Pollution Control District has, on the basis of substantial evidence, rebutted the presumption of adverse effect to the resources listed in Section 753(d) of the Fish and Game Code.

VI. DETERMINATION OF ENVIRONMENTAL DOCUMENT

On the basis of this initial evaluation:

[X] I find the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION should be prepared.

[ ] I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because the mitigation measures(s) described in the Initial Study will be applied to the project. A MITIGATED NEGATIVE DECLARATION should be prepared.

[ ] I find the proposed project, individually and/or cumulatively, MAY have a significant effect on the environment and determine that an ENVIRONMENTAL ASSESSMENT is required.

PAUL DAVIS
Program Policy Specialist
County of San Diego
Air Pollution Control District

May 1 1995
Date

AIR POLLUTION CONTROL DISTRICT
COUNTY OF SAN DIEGO

RULE 67.11 - WOOD PARTS AND PRODUCTS COATING OPERATIONS

WORKSHOP REPORT

A workshop notice was mailed to all companies known to operate wood parts and products coating facilities in San Diego County. Notices were also mailed to all Chambers of Commerce and all Economic Development Corporations in the county, the U.S. Environmental Protection Agency (EPA), the California Air Resources Board (CARB), and other interested parties.

The workshop was held on March 8, 1995, and was attended by 21 people. Written comments were also received. The workshop comments and District responses are as follows:

1. WORKSHOP COMMENT

Are coatings applied to gymnasium floors subject to Rule 67.11?

DISTRICT RESPONSE

No. Coatings applied to gymnasium floors are subject to District Rule 67.0 - Architectural Coatings.

2. WORKSHOP COMMENT

If a new coat of paint is applied over an existing "used" coat of paint, would the wooden object be considered a "refinished wood product" as defined in Subsection (c)(21)?

DISTRICT RESPONSE

Yes. The VOC limits found in Subsection (d)(3)(i) and (d)(3)(ii) apply to post-consumer "refinished" wood products.

3. WORKSHOP COMMENT

Subsection (c)(32) provides a definition for "washcoats", but this coating category does not seem to appear in the rule.

DISTRICT RESPONSE

Subsections (d)(2)(ii) and (d)(3)(ii) specify VOC limits for washcoats.

4. WORKSHOP COMMENT

Did ARB or EPA indicate any objection to the 500 gallon per year usage exemption provided in Subsection (b)(1)(i)?

DISTRICT RESPONSE

No. A copy of the proposed amendments were sent to both ARB and EPA for review. Neither agency indicated that this exemption would create an approvability issue, therefore the District expects both agencies to approve the exemption.

5. WORKSHOP COMMENT

Will facilities which use less than 500 gallons of coatings per year need to comply with the proposed July 1996 VOC limits?

DISTRICT RESPONSE

No. Subsection (b)(1)(i) states that facilities which apply less than 500 gallons of wood coatings per year are exempt from Sections (d), (e), and (f). Therefore, such operations are not subject to any of the VOC limits in Subsection (d)(2).

6. WORKSHOP COMMENT

Does Subsection (b)(1)(i) require both daily and monthly recordkeeping?

DISTRICT RESPONSE

No. This subsection requires that monthly purchase records and either daily or monthly records of coating usage be maintained on-site to demonstrate that annual wood coating consumption is less than 500 gallons.

7. WORKSHOP COMMENT

Does Subsection (f)(1)(iii) provide any size facility with a choice of keeping daily or monthly records?

DISTRICT RESPONSE

Yes. Subsection (f)(1)(iii) provides an option for any size facility to keep daily or monthly records to demonstrate compliance with Rule 67.11. However, some facilities may still need to maintain daily records if its Permit to Operate has specific daily recordkeeping requirements pursuant to the New Source Review rules.

8. WORKSHOP COMMENT

Does the exemption for musical instruments limit the annual usage of coatings which can be applied under this exemption?

DISTRICT RESPONSE

No. However, the District's New Source Review Rules, if applicable, may place annual usage limits on this type of operation.

9. WORKSHOP COMMENT

Why are wooden musical instruments specifically exempt from the VOC limits of the rule?

DISTRICT RESPONSE

Coatings applied to musical instruments, such as high quality guitars, which are manufactured at one affected facility in San Diego County have to meet unique performance requirements. The wood surface of a guitar vibrates in order to produce sound, and therefore requires a highly flexible coating which will not crack as a result of the vibrations. At the same time, such coatings must have a very high degree of hardness. It was demonstrated to the District that coatings complying with the limits of Rule 67.11 do not meet these unique requirements. It should also be noted that other air pollution control agencies in California provide similar exemptions for coating of musical instruments, and these types of operations will not be subject to EPA's proposed Control Technique Guideline (CTG) for wood furniture coating. Therefore, the District believes an exemption from VOC limits for musical instruments is justified.

10. WORKSHOP COMMENT

The proposed CTG for wood products coating operations being developed under the EPA Regulatory Negotiation process addresses the use of conversion varnishes. Conversion varnishes are high-solids coatings, which are more expensive and difficult to use than lacquer-based coatings. The Sacramento Air Quality Management District has provided a new category for conversion varnishes with a VOC limit of 550 g/l which will allow the continued use of solvent-based high-end systems. Based upon their limited and specialized use, could a specialty coating category be added for conversion varnishes?

DISTRICT RESPONSE

The District has investigated the use of this type of coating and has added a specialty coating category for conversion varnishes with a VOC limit of 550 g/l.

11. WORKSHOP COMMENT

Can a specialty coating category be added for extreme performance coatings?

DISTRICT RESPONSE

Based on information provided to the District, conversion varnishes are typically used to meet the performance requirements of an extreme performance coating environment. Therefore, a special category for extreme performance coatings is not necessary.

12. WORKSHOP COMMENT

Can the proposed 1996 VOC limits for clear topcoats and sealers be raised and the limits for other coatings be lowered, to offset any increase in emissions, as was done in Rule 67.18 - Marine Coating Operations?

DISTRICT RESPONSE

The District has made a preliminary estimate of the current emissions from each coating category in Rule 67.11. Based upon this estimate, it does not appear that there would be enough potential emission reductions to offset the significant increases in emissions if the VOC limits for clear topcoats and sealers were raised.

13. WORKSHOP COMMENT

The proposed limit for low-solids washcoats will require the use of water-based coatings which are not technically feasible for medium density fiberboard (MDF). Can a specialty coating category for MDF be established with a VOC limit which would allow the use of solvent-based coatings?

DISTRICT RESPONSE

Yes. The rule has been revised to include a specialty coating category for medium density fiberboard with a VOC limit of 680 g/l.

14. WORKSHOP COMMENT

Currently there are no low-solids stains, toners and washcoats which can comply with the VOC limit of 480 g/l except products based on 1,1,1-trichloroethane (TCA) or water. Coatings containing TCA are currently being phased out. At the same time, available water-based coatings do not work well as toners and washcoats because of their much slower drying time. Many coating manufacturers do not believe that acceptable coatings with a VOC content of 480 g/l or less will be available by July 1, 1996. Can the allowable VOC content for these coatings be raised to 700 g/l, i.e. to the same level as the present limit for high-solids stains?

DISTRICT RESPONSE

Yes. The proposed VOC limit for low-solids stains, toners and washcoats which will take effect upon rule adoption has been increased to 700 g/l. In addition, a future limit of 480 g/l , effective July 1997, has been added to encourage further development of coatings with a lower VOC content. The District will also continue to monitor the progress made in the use of lower VOC materials in the South Coast Air Quality Management District.

15. WORKSHOP COMMENT

Is it necessary to include the proposed lower July 1996 VOC limits in the revision of Rule 67.11 for adoption into the State Implementation Plan (SIP), or can the District wait until it is determined that these limits are technologically feasible for all field use applications?

DISTRICT RESPONSE

The federal Clean Air Act requires the District to submit rules regulating VOC emissions which reflect Reasonably Available Control Technology (RACT). RACT is defined as the lowest emission limitation which is proven in field use and is technically and economically feasible. At this time, there is no federal RACT determination for wood coating operations. Based on industry concerns regarding the technical and economic feasibility of water-based coatings, the District has decided not to include the proposed future VOC limits in the SIP. When EPA finalizes a Control Technique Guideline specifying RACT limits for wood furniture coating operations, the District will consider revisions to the VOC limits in Rule 67.11 to reflect federal requirements, and may submit them as a SIP revision.

16. WORKSHOP COMMENT

Many of the wood coating rules in California, including San Diego's, contain future VOC limits which are much stricter than the proposed Control Technique Guideline (CTG) limits for wood furniture coating operations. Rule 67.11 should only be as strict as the proposed federal rule.

DISTRICT RESPONSE

The CTG emission limitations proposed by EPA reflect the requirements of the federal Clean Air Act. However, the District must also comply with the requirements of the California Clean Air Act (CCAA). The CCAA establishes state air quality standards which are stricter than the federal standards. San Diego County violates the state standard for ozone and is designated as a serious ozone non-attainment area. Therefore, the District is mandated by California law to adopt rules which reflect the Best Available Retrofit Control Technology (BARCT) for sources of ozone precursors, i.e. volatile organic compounds and nitrogen oxides. The California Health & Safety code defines BARCT as "an emission limitation that is based on the maximum degree of reduction achievable, taking into account environmental, energy, and economic impacts by each class or category of source".

While a specific BARCT determination for wood coating operations has not yet been made, the California Air Resource Board (ARB) has assumed that the lowest VOC limits found in any local district rule (in this case, the South Coast and Bay Area Air Quality Management Districts), represent BARCT for that source category.

The low VOC limits in these districts were first proposed in 1990, based on information from coating manufacturers that the limits were technologically achievable by utilizing water-based coatings. Today there are water-based coatings produced by several companies which meet the VOC limits specified in the South Coast and Bay Area District rules and which are being used by a few comparatively large furniture manufacturers. However, the District believes that water-based coatings do not perform well enough in field applications to be used by all wood coating facilities, especially small operations. In addition, while the low-VOC coating materials themselves are comparable in cost with solvent-based products, the use of water-based coatings may require new skills, specialized and more expensive processing equipment, and increased labor costs, to achieve a high quality surface coating that is comparable to the quality achieved by conventional systems and demanded by wood product customers.

This information was presented at a recent meeting of the Technical Review Group (TRG) of the California Air Pollution Control Officers Association. The TRG directed its Industrial Coatings Committee to accelerate the development of a statewide RACT/BARCT determination for wood coating operations. That determination will consider the full economic impact on all sources subject to the recommended VOC limits including small businesses. The District will be informing all workshop participants and other interested parties on the progress of this work. The District also urges all users, manufacturers and suppliers of wood coatings in San Diego County to actively participate in this process by providing the relevant information and taking part in the future workshops which will be conducted by the Industrial Coating Committee together with ARB.

17. WORKSHOP COMMENT

Can the proposed July 1996 VOC limits be postponed until July 1997 to allow facilities more time to experiment with and develop the process changes necessary for using water-based coatings?

DISTRICT RESPONSE

Yes. The future effective date for lower VOC limits has been postponed to July 1997 pending the outcome of the RACT/BARCT determination for wood coating operations. This will also allow the District time to refine the emission inventory for these types of coatings, research the appropriate applications of water-based coatings within the wood coating industry, and make any necessary changes to Rule 67.11.

18. WORKSHOP COMMENT

Can a "bubble" concept be used to average emissions rather than comply with the proposed VOC limits of the rule?

DISTRICT RESPONSE

Yes. Rule 67.11 contains a provision which allows the use of an Alternative Emission Control Plan ("bubble" or averaging concept) provided that it complies with the requirements of Rule 67.1. However, Rule 67.1 contains a 20% discount provision, as specified by EPA policy, which requires the total averaged emissions to be 20% less than the emissions which would occur if all coatings used were in compliance with the VOC standards of Rule 67.11.

19. WORKSHOP COMMENT

The phasing-out of coatings containing 1,1,1-trichloroethane and the current problems associated with water-based coatings will result in more facilities using traditional solvent-based coatings. This, in turn, may cause an affected source to exceed a facility-wide annual emissions cap imposed by the permit conditions. Can the District revise the emission cap to take into account the necessity of conversion from trichloroethane-based coatings to solvent-based coatings?

DISTRICT RESPONSE

If any currently permitted operation contains a specific permit condition limiting facility-wide annual emissions, and that limit would be exceeded because of solvent changes or production increases, an application must be submitted to the District requesting an increase in the annual VOC emission limit. The VOC emission increase will likely be subject to the District's New Source Review rules. Depending on the size of the source and the amount of the emission increase, these rules may require the facility to install the Best Available Control Technology (or justify an exemption) and provide emission offsets for some or all of the emission increases sought.

20. WORKSHOP COMMENT

If EPA designates acetone as a non-photochemically reactive (exempt) compound, will the District do the same?

DISTRICT RESPONSE

The designation of acetone as an exempt compound has not yet been finalized by EPA. If and when EPA makes its final decision, the District will consider its policy in consultation with ARB. Presently, the District is planning to submit comments to ARB regarding the anticipated increase in acetone usage in San Diego County if EPA's proposal to exempt acetone from the VOC definition is finalized. The ARB must also approve the exemption of acetone before the District can revise its VOC definition.

21. WORKSHOP COMMENT

Water-based technology is desirable if it can produce an acceptable product which can compete in the world market place, since water-based coatings are less flammable and less toxic than solvent-based coatings. Water-based coatings do not have wide-spread use because their quality is not acceptable. The proposed July 1996 VOC limits will require the use of water-based coatings, which will put San Diego County wood coating facilities at a competitive disadvantage, and will eventually drive them out of business.

DISTRICT RESPONSE

Many air districts in California, including other districts in Southern California are requiring wood coating operations to use a water-based coating system by the middle of 1995. However, as noted in the responses to the workshop comments # 16 and 17, the proposed postponement of lower VOC limits in Rule 67.11 until July 1997 will also allow enough time for the District and industry representatives to work with ARB and the TRG Industrial Coating Committee on the development of a state-wide RACT/BARCT determination.

22. ARB COMMENT

The proposed VOC limits in Subsections (d)(i) and (d)(ii) are less stringent that those found in other district rules such as Bay Area Air Quality Management District Rule 8-32 and South Coast Air Quality Management District Rule 1136. For example, the VOC limit for high solids stains effective July 1996 in proposed Rule 67.11 is 700 g/l compared to 240 g/l in the South Coast and Bay Area rules.

Upon discussing these less stringent limits with the District, it is our understanding the District is anticipating the release of a U.S. EPA CTG document regarding wood product coating operations. However, because the standards specified in Rule 67.11 are significantly higher than those in other district rules, we encourage the District to further investigate the feasibility of lowering these standards in future revisions of Rule 67.11.

DISTRICT RESPONSE

Based on information provided at the workshop and the District's own observation of some wood coating operations, the District no longer believes with "a reasonable degree of certainty" that the future proposed VOC limits in the Bay Area and South Coast air districts are technologically and/or economically feasible for all affected facilities in San Diego County, including small businesses. Therefore, the District has postponed the effective dates of the lower VOC limits until July 1997 to allow ARB and the TRG Industrial Coating Committee enough time to develop a statewide RACT/ BARCT determination for this source category.

23. ARB COMMENT

Subsection (g)(6) specifies methods for quantifying water and exempt compounds in a solvent and requires that the total vapor pressure be corrected for the partial pressure of water and exempt compounds. No general analytical procedure for quantifying compounds other than water and exempt compounds is specified. Correcting vapor pressure for water and exempt compounds requires that their mole fraction in the solvent be known; therefore, general analytical methods such as ASTM E168-92, E169-93, and E260-91 should be specified for determining solvent composition.

DISTRICT RESPONSE

Subsection (g)(6) has been revised as suggested.

24. EPA COMMENT

Subsection (g)(9) does not specify a test method for determining capture efficiency. Recently, EPA ended the capture efficiency moratorium, as indicated in the memo from John Seitz dated February 7, 1995. The appropriate citations for capture efficiency test methods are contained in the EPA reference document entitled "Guidelines for Determining Capture Efficiency", dated January 9, 1995. References should be made to Appendix A of this document as appropriate.

DISTRICT RESPONSE

Subsection (g)(9) has been revised to include language which references EPA's new Guidelines for Determining Capture Efficiency.

25. EPA COMMENT

EPA is developing a Control Techniques Guideline (CTG) for the wood furniture industry. When finalized, the CTG will specify the "presumptive norm" for what is federal reasonably available control technology (RACT) for wood furniture coating processes. EPA estimates that the CTG will be finalized later this year. If state or local agency rules differ significantly (from the CTG) in terms of standards and enforceability, they will have to be revised to meet federal RACT.

DISTRICT RESPONSE

When the CTG for wood furniture coating operations is published, the District will revise Rule 67.11 as appropriate to comply with the requirements of the federal Clean Air Act.

26. EPA COMMENT

The Rule 67.11 VOC limits effective July 1996 are significantly less stringent than the limits in similar wood products coatings rules of other California air districts. In order to ensure consistency throughout the state, EPA strongly recommends that the coating limits in Subsection (d)(2)(i) be revised to conform with other California districts.

DISTRICT RESPONSE

The District is not confident that the proposed July 1996 VOC limits are technologically and economically feasible for all sources including small businesses. Therefore, the limits referenced in the comment have been postponed until July 1997. In addition, those future limits will not be included in the version of Rule 67.11 to be submitted to EPA for inclusion in the SIP.

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4/18/95