State of California
AIR RESOURCES BOARD

Resolution 89-55

May 11, 1989

Agenda Item No.: 89-8-4

WHEREAS, on November 17, 1988, the Air Resources Board (the Board) conducted a public hearing to consider the adoption of two new regulations which would establish statewide limits for the sulfur content and aromatic hydrocarbon content of motor vehicle diesel fuel;

WHEREAS, following the public hearing, on November 17, 1988, the Board adopted Resolution 88-59, in which the Board approved the adoption of Sections 2255 and 2256, Title 13, California Code of Regulations, as set forth in Attachments A and B thereto, and the amendment of Section 2252, Title 13, California Code of Regulations, as set forth in Attachment C thereto, with the modifications set forth or described in Attachment D thereto, and with additional modifications identified in the Resolution;

WHEREAS, Resolution 88-59 directed the Executive Officer to incorporate into Attachments A, B, and C the modifications approved by the Board therein, to conduct a workshop on such modifications, and either to adopt the regulatory actions in Attachments A, B, and C as modified after making them available to the public for a comment period of 15 days, with such minor modifications as may be desirable and necessary, or to present the regulations to the Board for final consideration and adoption, as he determines is most appropriate;

WHEREAS, following a staff workshop on draft language, the Executive Officer made available to the public for a 15-day written comment period modified texts of new Sections 2255 and 2256, Title 13, California Code of Regulations, as set forth in Attachments 1 and 2 hereto, and amendments to Section 2252, as set forth in Attachment 3 hereto, with the changes to the originally proposed text clearly indicated;

WHEREAS, the Board has considered the public comments made during the 15-day availability period;

WHEREAS, the Board finds that:

The reference fuel specifications for API gravity, viscosity, distillation range in Section 2256(g)(3) as proposed should be modified as set forth in Attachment 4 in order to assure the practicality of producing such fuel for test purposes; and

The modifications in Attachments 1, 2, 3, and 4 are necessary and appropriate to provide additional flexibility in meeting the

regulatory requirements, tailor the requirements more closely to the present financial ability of the affected industry to comply, and clarify the intent of the provisions.

NOW, THEREFORE, BE IT RESOLVED that the recitals and findings contained in Resolution 88-59 are incorporated herein.

BE IT FURTHER RESOLVED, that the Board hereby adopts Section 2255, and amends Section 2252, Title 13, California Code of Regulations, as set forth in Attachments 1 and 3 hereto.

BE IT FURTHER RESOLVED, that the Board hereby approves the adoption of Section 2256, Title 13, California Code of Regulations, as set forth in Attachment 3 hereto, with the modifications contained in Attachment 4 hereto, and directs the Executive Officer to adopt the regulation after making it available to the public for a 15-day period for comment on the modifications contained in Attachment 4, with such minor modifications as may be appropriate, provided that the Executive Officer shall present the regulation to the Board for further consideration if he determines that this is warranted in light of written comments received.

I hereby certify that the above is a true and correct copy of Resolution 89-55, as adopted by the Air Resources Board.

Cary Allison, Board Secretary

Attachment A

May 1989

ARB-CAPCOA Suggested Control Measure for Architectural Coatings

RULE _____ ARCHITECTURAL COATINGS

(a) APPLICABILITY

This rule is applicable to any person who supplies, sells, offers for sale, applies, or solicits the application of any architectural coating, or who manufactures any architectural coating for use within the District.

(b) DEFINITIONS

(1) Appurtenances: Accessories to an architectural structure, including, but not limited to: hand railings, cabinets, bathroom and kitchen fixtures, fences, rain-gutters and down-spouts, window screens, lamp-posts, heating and air conditioning equipment, other mechanical equipment, large fixed stationary tools and concrete forms.

(2) Architectural Coatings: Coatings applied to stationary structures and their appurtenances, to mobile homes, to pavements, or to curbs.

(3) Below-Ground Wood Preservatives: Coatings formulated to protect below-ground wood from decay or insect attack and which contain a wood preservative chemical registered by the California Department of Food and Agriculture.

(4) Bituminous Coatings: Black or brownish coating materials which are soluble in carbon disulfide, which consist mainly of hydrocarbons, and which are obtained from natural deposits or as residues from the distillation of crude oils or of low grades of coal.

(5) Bond Breakers: Coatings applied between layers of concrete to prevent the freshly poured top layer of concrete from bonding to the layer over which it is poured.

(6) Clear Wood Finishes: Clear and semi-transparent coatings, including lacquers and varnishes, applied to wood substrates to provide a transparent or translucent solid film.

(7) Concrete Curing Compounds: Coatings applied to freshly poured concrete to retard the the evaporation of water.

(8) Dry Fog Coatings (Mill White Coatings): Coatings formulated only for spray application such that overspray droplets dry before subsequent contact with other surfaces.

(9) Exempt Solvents: Compounds identified as exempt under the definition of Volatile Organic Compounds, Subsection (b)(38).

(10) Fire-Retardant Coatings: Coatings which have a flame spread index of less than 25 when tested in accordance with ASTM Designation E-84-87, "Standard Test Method for Surface Burning Characteristics of Building Material," after application to Douglas fir according to the manufacturer's recommendations.

(11) Form-Release Compounds: Coatings applied to a concrete form to prevent the freshly poured concrete from bonding to the form. The form may consist of wood, metal, or some material other than concrete.

(12) Graphic Arts Coatings (Sign Paints): Coatings formulated for and hand-applied by artists using brush or roller techniques to indoor and outdoor signs (excluding structural components) and murals, including lettering enamels, poster colors, copy blockers, and bulletin enamels.

(13) High-Temperature Industrial Maintenance Coatings: Industrial Maintenance Coatings formulated for and applied to substrates exposed continuously or intermittently to temperatures above 400 degrees Fahrenheit.

(14) Industrial Maintenance Anti-Graffiti Coatings: Two-component clear industrial maintenance coatings formulated for and applied to exterior walls and murals to resist repeated scrubbing and exposure to harsh solvents.

(15) Industrial Maintenance Coatings: High performance coatings formulated for and applied to substrates in industrial, commercial, or institutional situations that are exposed to one or more of the following extreme environmental conditions:

(i) immersion in water, wastewater, or chemical solutions (aqueous and non-aqueous solutions), or chronic exposure of interior surfaces to moisture condensation;
(ii) acute or chronic exposure to corrosive, caustic or acidic agents, or to chemicals, chemical fumes, chemical mixtures, or solutions;
(iii) repeated exposure to temperatures in excess of 250 F;
(iv) repeated heavy abrasion, including mechanical wear and repeated scrubbing with industrial solvents, cleansers, or scouring agents; or
(v) exterior exposure of metal structures.

Industrial Maintenance Coatings are not for residential use or for use in areas of industrial, commercial, or institutional facilities such as office space and meeting rooms.

(16) Lacquers: Clear wood finishes formulated with nitrocellulose or synthetic resins to dry by evaporation without chemical reaction, including clear lacquer sanding sealers.

(9) Exempt Solvents: Compounds identified as exempt under the definition of Volatile Organic Compounds, Subsection (b)(38).

(10) Fire-Retardant Coatings: Coatings which have a flame spread index of less than 25 when tested in accordance with ASTM Designation E-84-87, "Standard Test Method for Surface Burning Characteristics of Building Material," after application to Douglas fir according to the manufacturer's recommendations.

(11) Form-Release Compounds: Coatings applied to a concrete form to prevent the freshly poured concrete from bonding to the form. The form may consist of wood, metal, or some material other than concrete.

(12) Graphic Arts Coatings (Sign Paints): Coatings formulated for and hand-applied by artists using brush or roller techniques to indoor and outdoor signs (excluding structural components) and murals, including lettering enamels, poster colors, copy blockers, and bulletin enamels.

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(ii) acute or chronic exposure to corrosive, caustic or acidic agents, or to chemicals, chemical fumes, chemical mixtures, or solutions;
(iii) repeated exposure to temperatures in excess of 250 F;
(iv) repeated heavy abrasion, including mechanical wear and repeated scrubbing with industrial solvents, cleansers, or scouring agents; or
(v) exterior exposure of metal structures.

Industrial Maintenance Coatings are not for residential use or for use in areas of industrial, commercial, or institutional facilities such as office space and meeting rooms.

(16) Lacquers: Clear wood finishes formulated with nitrocellulose or synthetic resins to dry by evaporation without chemical reaction, including clear lacquer sanding sealers.

(17) Magnesite Cement Coatings: Coatings formulated for and applied to magnesite cement decking to protect the magnesite cement substrate from erosion by water.

(18) Mastic Texture Coatings: Coatings formulated to cover holes and minor cracks and to conceal surface irregularities, and applied in a thickness of at least 10 mils (dry, single coat).

(19) Metallic Pigmented Coatings: Coatings containing at least 0.4 pounds of metallic pigment per gallon of coating as applied.

(20) Multi-Colored Coatings: Coatings which exhibit more than one color when applied and which are packaged in a single container and applied in a single coat.

(21) Opaque Stains: All stains that are not classified as semi-transparent stains.

(22) Opaque Wood Preservatives: All wood preservatives not classified as clear or semi-transparent wood preservatives or as below-ground wood preservatives.

(23) Pre-treatment Wash Primers: Coatings which contain a minimum of 1/2% acid by weight, applied directly to bare metal surfaces to provide necessary surface etching.

(24) Primers: Coatings formulated and applied to substrates to provide a firm bond between the substrate and subsequent coats.

(25) Residential Use: Use in areas where people reside or lodge including, but not limited to single and multiple family dwellings, condominiums, mobile homes, apartment complexes, motels, and hotels.

(25) Roof Coatings: Coatings formulated for application to exterior roofs and for the primary purpose of preventing penetration of the substrate by water, or reflecting heat and reflecting ultraviolet radiation. Metallic pigmented roof coatings which qualify as metallic pigmented coatings shall not be considered to be in this category, but shall be considered to be in the metallic pigmented coatings category.

(27) Sanding Sealers: Clear wood coatings formulated for and applied to bare wood for sanding and to seal the wood for subsequent application of varnish. To be considered a sanding sealer a coating must be clearly labelled as such.

(28) Sealers: Coatings formulated for and applied to a substrate to prevent subsequent coatings from being adsorbed by the substrate, or to prevent harm to subsequent coatings by materials in the substrate.

(29) Semi-Transparent Stains: Coatings formulated to change the color of a surface but not conceal the surface.

(30) Semi-Transparent Wood Preservatives: Wood preservative stains formulated and used to protect exposed wood from decay or insect attack by the addition of a wood preservative chemical registered by the California Department of Food and Agriculture, which change the color of a surface but do not conceal the surface, including clear wood preservatives.

(31) Shellacs: Clear or pigmented coatings formulated solely with the resinous secretions of the lac beetle (laccifer lacca), thinned with alcohol, and formulated to dry by evaporation without a chemical reaction.

(32) Solicit: To require for use or to specify, by written or oral contract.

(33) Swimming Pool Coatings: Coatings formulated and used to coat the interior of swimming pools and to resist swimming pool chemicals.

(34) Swimming Pool Repair Coatings: Chlorinated rubber based coatings used for the repair and maintenance of swimming pools over existing chlorinated rubber based coatings.

(35) Traffic Coatings: Coatings formulated for and applied to public streets, highways, and other surfaces including, but not limited to curbs, berms, driveways, and parking lots.

(36) Undercoaters: Coatings formulated and applied to substrates to provide a smooth surface for subsequent coats.

(37) Varnishes: Clear wood finishes formulated with various resins to dry by chemical reaction on exposure to air.

(38) Volatile Organic Compounds (VOC): Compounds of carbon which may be emitted to the atmosphere during the application of and/or subsequent drying or curing of coatings subject to this rule, except methane, carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates, ammonium carbonate, 1,1,1-trichloroethane, methylene chloride, trichlorofluoromethane (CFC-11), dichlorodifluoromethane (CFC-12), chlorodifluoromethane (CFC-22), trifluoromethane (CFC-23), trichlorotrifluoroethane (CFC-113), dichlorotetrafluoroethane (CFC-114), and chloropentafluorethane (CFC-115).

(39) Waterproofing Sealers: Colorless coatings which are formulated and applied for the sole purpose of protecting porous substrates by preventing the penetration of water and which do not alter surface appearance or texture.

(30) Semi-Transparent Wood Preservatives: Wood preservative stains formulated and used to protect exposed wood from decay or insect attack by the addition of a wood preservative chemical registered by the California Department of Food and Agriculture, which change the color of a surface but do not conceal the surface, including clear wood preservatives.

(31) Shellacs: Clear or pigmented coatings formulated solely with the resinous secretions of the lac beetle (laccifer lacca), thinned with alcohol, and formulated to dry by evaporation without a chemical reaction.

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(36) Undercoaters: Coatings formulated and applied to substrates to provide a smooth surface for subsequent coats.

(37) Varnishes: Clear wood finishes formulated with various resins to dry by chemical reaction on exposure to air.

(38) Volatile Organic Compounds (VOC): Compounds of carbon which may be emitted to the atmosphere during the application of and/or subsequent drying or curing of coatings subject to this rule, except methane, carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates, ammonium carbonate, 1,1,1-trichloroethane, methylene chloride, trichlorofluoromethane (CFC-11), dichlorodifluoromethane (CFC-12), chlorodifluoromethane (CFC-22), trifluoromethane (CFC-23), trichlorotrifluoroethane (CFC-113), dichlorotetrafluoroethane (CFC-114), and chloropentafluorethane (CFC-115).

(39) Waterproofing Sealers: Colorless coatings which are formulated and applied for the sole purpose of protecting porous substrates by preventing the penetration of water and which do not alter surface appearance or texture.

(c) STANDARDS

(1) Except as provided in Subsections (c)(2), (c)(3), and (c)(4), no person shall, within the District, supply, offer for sale, sell, apply, or solicit the application of any architectural coating which, at the time of sale or manufacture, contains more than 250 grams of volatile organic compounds per liter of coating (less water and exempt solvents, and excluding any colorant added to tint bases), or manufacture, blend, or repackage such a coating for use within the District.

(2) Except as provided in Subsections (c)(3) and (c)(4), no person shall, within the District, supply, offer for sale, sell, apply, or solicit the application of any architectural coating listed in the Table of Standards which contains volatile organic compounds (less water and exempt solvents, and excluding any colorant added to tint bases) in excess of the corresponding limit specified in the table, after the corresponding date specified, or manufacture, blend, or repackage such a coating for use within the district.

Table of Standards
(grams of VOC per liter)

	Effective Dates			
	9/1/84	9/1/89	9/1/92	9/1/94
Below-Ground Wood Preservatives	--	600	350	
Bond Breakers	--	750	350 (9/1/90)	
Clear Wood Finishes				
Lacquer	--	680		
Sanding Sealers		550	350	
Varnish	500	350		
Concrete Curing Compounds	--	350		
Dry Fog Coatings		400		
Fire-Retardant Coatings				
Clear	--	650		
Pigmented	--	350		
Form-Release Compounds	--	250		
Graphic Arts (Sign) Coatings	--	500		
Industrial Maintenance Coatings	--	420	340	
Industrial Maintenance Anti-Graffitti Coatings	--	600	340	
High Temperature Industrial Maintenance Coatings	--	650	550	420
Magnesite Cement Coatings	--	600	450	
Mastic Texture Coatings	--	300		
Metallic Pigmented Coatings	--	500		
Multi-Color Coatings	--	580	420	
Opaque Stains	400	350		
Opaque Wood Preservatives	400	350		
Pre-treatment Wash Primers	--	780	780	420
Primers Sealers & Undercoaters	400	350		
Roof Coatings	--	300		
Semi-transparent Stains	--	350		
Semi-transparent and Clear Wood Preservatives	--	350		
Shellac				
Clear	--	730		
Pigmented	--	550		
Swimming Pool Coatings	--	650	340 (9/1/92)	
Repair and Maintenance Coatings	--	650	340 (9/1/97)	
Traffic Paints				
Public streets & highways	415	250		
Other surfaces	250	250		
Black traffic coatings	--	250		
Waterproofing Sealers	--	400		

Table of Standards
(grams of VOC per liter)

	Effective Dates			
	9/1/84	9/1/89	9/1/92	9/1/94
Below-Ground Wood Preservatives	--	600	350	
Bond Breakers	--	750	350 (9/1/90)	
Clear Wood Finishes				
Lacquer	--	680		
Sanding Sealers		550	350	
Varnish	500	350		
Concrete Curing Compounds	--	350		
Dry Fog Coatings		400		
Fire-Retardant Coatings				
Clear	--	650		
Pigmented	--	350		
Form-Release Compounds	--	250		
Graphic Arts (Sign) Coatings	--	500		
Industrial Maintenance Coatings	--	420	340	
Industrial Maintenance Anti-Graffitti Coatings	--	600	340	
High Temperature Industrial Maintenance Coatings	--	650	550	420
Magnesite Cement Coatings	--	600	450	
Mastic Texture Coatings	--	300		
Metallic Pigmented Coatings	--	500		
Multi-Color Coatings	--	580	420	
Opaque Stains	400	350		
Opaque Wood Preservatives	400	350		
Pre-treatment Wash Primers	--	780	780	420
Primers Sealers & Undercoaters	400	350		
Roof Coatings	--	300		
Semi-transparent Stains	--	350		
Semi-transparent and Clear Wood Preservatives	--	350		
Shellac				
Clear	--	730		
Pigmented	--	550		
Swimming Pool Coatings	--	650	340 (9/1/92)	
Repair and Maintenance Coatings	--	650	340 (9/1/97)	
Traffic Paints				
Public streets & highways	415	250		
Other surfaces	250	250		
Black traffic coatings	--	250		
Waterproofing Sealers	--	400		

(3) If anywhere on the container of any coating listed on the Table of Standards, on any sticker or label affixed thereto, or in any sales or advertising literature, any representation is made that the coating may be used as, or is suitable for use as a coating for which a lower VOC standard is specified in the table or in Subsection (c)(1), then the lowest VOC standard shall apply. This requirement does not apply to the representation of the following coatings in the manner specified:

(i) High-Temperature Industrial Maintenance Coatings, which may be represented as metallic pigmented coatings for use consistent with the definition of high temperature industrial maintenance coatings;
(ii) Lacquer Sanding Sealers, which may be recommended for use as sanding sealers in conjunction with clear lacquer topcoats;
(iii) Metallic Pigmented Coatings, which may be recommended for use as primers, sealers, undercoaters, roof coatings, or industrial maintenance coatings; and
(iv) Shellacs.

(4) Sale of a coating manufactured prior to the effective date of the corresponding standard in the Table of Standards, and not complying with that standard, shall not constitute a violation of Subsection (c)(2) until three years after the effective date of the standard, nor shall application of such a coating.

(5) All VOC-containing materials shall be stored in closed containers when not in use. In use includes, but is not limited to: being accessed, filled, emptied, maintained or repaired.

(d) ADMINISTRATIVE REQUIREMENTS

(1) Each container of any coating subject to this rule shall display the date on which the contents were manufactured or a code indicating the date of manufacture. Each manufacturer of such coatings shall file with the Air Pollution Control Officer and the Executive Officer of the California Air Resources Board, an explanation of each code.

(2) Each container of any coating subject to this rule shall display a statement of the manufacturer's recommendation regarding thinning of the coating. This recommendation shall not apply to the thinning of architectural coatings with water. The recommendation shall specify that the coating is to be employed without thinning or diluting under normal environmental and application conditions unless any thinning recommended on the label for normal environmental and application conditions does not cause a coating to exceed its applicable standard.

(3) Each container of any coating subject to this rule and manufactured after (one year from the date of adoption) shall display the maximum VOC content of the coating, as applied, and after any thinning as recommended by the manufacturer. VOC content shall be displayed as grams of VOC per liter of coating (less water and exempt solvent, and excluding any colorant added to tint bases). VOC content displayed may be calculated using product formulation data, or may be determined using the test method in Subsection (f)(1).

(4) Beginning (one year from the date of adoption), the labels of all industrial maintenance coatings shall include the statement "Not for Residential Use," or "Not for Residential Use in California," prominently displayed.

(e) EXEMPTIONS

The requirements of this rule do not apply to:

(1) Architectural coatings manufactured for use outside of the District or for shipment to other manufacturers for repackaging.

(2) Architectural coatings supplied in and applied from containers having capacities of one liter or less, which were offered in containers of such capacities prior to (the date of adoption of this rule).

(3) Architectural coatings sold in non-refillable aerosol containers having capacities of one liter or less.

(4) Emulsion-type bituminous pavement sealers.

(f) TEST METHODS

(1) Volatile Organic Compounds: Measurement of volatile organic compounds in architectural coatings shall be conducted and reported in accordance with EPA Test Method 24 (40 CFR 60, Appendix A), or an equivalent method approved by the air pollution control officer.

(3) Each container of any coating subject to this rule and manufactured after (one year from the date of adoption) shall display the maximum VOC content of the coating, as applied, and after any thinning as recommended by the manufacturer. VOC content shall be displayed as grams of VOC per liter of coating (less water and exempt solvent, and excluding any colorant added to tint bases). VOC content displayed may be calculated using product formulation data, or may be determined using the test method in Subsection (f)(1).

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