(**Adopted:** 2/4/77; **Amended:** 4/1/77; **Readopted by Statute:** 07/01/97; **Amended:** 8/19/97; **Readopted by Statute:** 01/01/02; **Amended:** 5/17/05)

RULE 101
Title

These rules and regulations shall be known as the rules of the Antelope Valley Air Quality Management District.

[SIP: Submitted as amended 8/19/97 on 3/10/98; Approved _____, 40 CFR 52.220(c)(41)(xvi)(A); Approved 9/8/78, 43 FR 40011, 40 CFR 52.220(c)(39)(iii)(c)]

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(**Adopted:** 2/4/77; **Amended:** 4/1/77; **Amended:** 2/2/77; **Amended:** 11/4/88; **Amended:** 7/9/93; **Amended:** 1/17/95; **Readopted by Statute:** 07/01/97; **Amended:** 8/19/97; **Readopted by Statute:** 01/01/02; **Amended:** 5/17/05)

RULE 102
Definition of Terms

Except as otherwise specifically provided in these rules and except where the context otherwise indicates, words used in these rules are used in exactly the same sense as the same words are used in Division 26 of the Health and Safety Code.

(A) Agricultural Burning - Open outdoor fires used in agricultural operations in the growing of crops or raising of fowls or animals, or open outdoor fires used in forest management, range improvement, or the improvement of land for wildlife and game habitat or disease and pest prevention. Agricultural burning also includes open outdoor fires used in the operation or maintenance of a system for the delivery of water for the purposes specified above.

(B) Agricultural Operations - Any operation occurring on a ranch or farm directly related to the growing of crops, or raising of fowls or animals for the primary purpose of making a profit or for a livelihood.

(C) Agricultural Wastes - Unwanted or unsalable materials produced wholly from agricultural operations, other than forest or range management operations, directly related to the growing of crops or animals for the primary purpose of making a profit or for a livelihood. The term does not include wastes created by land use conversion to non-agricultural purposes unless the destruction of such waste by open outdoor fire is ordered by the County or State Agricultural Commissioner upon his determination that the waste is infested with infections transmittable or contagious plant disease which is an immediate hazard to agricultural operations conducted on adjoining or nearby property.

(D) Air Pollution Control Officer (APCO) - The person appointed to the position of Air Pollution Control Officer pursuant to the provisions of Health and Safety Code §40750 and his or her designee.

(E) Air Contaminant Or Air Pollutant - Any discharge, release, or other propagation into the atmosphere directly or indirectly caused by man and includes, but is not limited to, smoke, charred paper, dust, soot, grime, carbon, fumes, gases, odors, particulate matters, acids or any combination thereof.

(F) Atmosphere - The air that envelopes or surrounds the earth. Where air pollutants are emitted into a building not designed specifically as a piece of air pollution control equipment, such emission into the building shall be considered an emission into the atmosphere.

(G) Basic Equipment - Any article, machine, equipment or contrivance which causes the issuance of air contaminants.

(H) Breakdown - A condition caused by an accidental fire or non-preventable mechanical or electrical failure.

(I) Combustible Refuse - Any solid or liquid combustible waste material containing carbon in a free or combined state.

(J) Combustion Contaminants - Particulate matter discharged into the atmosphere from the burning of any kind of material containing carbon in a free or combined state.

(K) Compliance Schedule - The date or dates by which a source or category of sources is required to comply with specific emission limitations contained in any air pollution rule, regulation, or statute and with any increment of progress toward such compliance.

(L) Control Equipment - Air pollution control equipment which eliminates, reduces or controls the issuance of air contaminants.

(M) District - The Antelope Valley Air Quality Management District that includes the geographical area described in District Rule 103.

(N) Dusts - Minute solid particles released into the air by natural forces or by mechanical processes including, but not limited to, crushing, grinding, milling, drilling, demolishing, shoveling, conveying, covering, bagging, and sweeping.

(O) Executive Officer - The APCO of the Antelope Valley Air Quality Management District or his or her designee.

(P) Equipment means any article, machine, or other contrivance.

(Q) Exempt Compounds - Any compound listed in 40 CFR 51.100(s)(1). *[Suggested by comment letter of 3/17/05 for consistency with other rules. Derived from Rule 1301(ZZZ)]*

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[Avoids conflict with newer definitions of VOC in various Rules]

(R) Fleet Vehicles means gasoline-powered motor vehicles as defined by §415 of the Vehicle Code and which are operated from one business address.

(S) Fugitive Dust means any solid particulate matter that becomes airborne, other than that emitted from an exhaust stack, directly or indirectly as a result of the activities of man.

(T) Gasoline - Any petroleum distillate having a Reid Vapor Pressure of 200 mm Hg (3.9 pounds per square inch), or greater.

(U) Hearing Board - The Hearing Board of the Antelope Valley Air Quality Management District.

(V) Increments Of Progress - Steps to be taken by an owner or operator to bring a source of air contaminants into compliance. (See definition of "Schedule of Increments of Progress.")

(W) Loading Facility - Any aggregation or combination of organic liquid loading equipment which is both possessed by one person, and located so that all the organic liquid loading outlets, for such aggregation or combination of loading equipment can be encompassed within any circle of 90 meters (295 feet) in diameter.

(X) Motor Vehicle - A vehicle which is self-propelled.

(Y) Multiple-Chamber Incinerator - Any equipment, structure or part of a structure, used to dispose of combustible refuse by burning, consisting of three or more refractory lined combustion chambers, physically separated by refractory walls, interconnected by gas passage ports or ducts.

(Z) Oil-Effluent Water Separator - Any tank, box, sump or other container in which any petroleum or product thereof, floating on or entrained or contained in water entering such tank, box, sump, or other container, is physically separated and removed from such water prior to outfall, drainage, or recovery of such water.

(AA) Organic Material - A chemical compound of carbon excluding carbon monoxide, carbon dioxide, carbonic acid, metallic carbides, metallic carbonates and ammonium carbonate.

(BB) Organic Solvents - Organic materials which are liquids at standard conditions~~.~~ and which are used as dissolvers, viscosity reducers or cleaning agents, except that such material exhibiting a boiling point higher than 104^{o}C (219^{o}F) at 0.5 mm Hg absolute pressure or having an equivalent vapor pressure shall not be considered to be solvents unless exposed to temperatures exceeding 104^{o}C (219^{o}F).

(CC) Particulate Matter - Any material, except uncombined water, which exists in a finely divided form as a liquid or solid at standard conditions.

(DD) PPM - Parts per million by volume.

(EE) Person - Any individual, firm, association, organization, partnership, business trust, corporation, company, contractor, supplier, installer, user or owner, or any state or local governmental agency or public district or any other officer or employee thereof. Person also means the United States or its agencies to the extent authorized by Federal law.

(FF) Photochemically Reactive Solvent - Any solvent with an aggregate of more than twenty percent (20%) of its total volume composed of the chemical compounds classified below or which exceeds any of the following individual percentage composition limitations, referred to the total volume of solvent:

(a) A combination of hydrocarbons, alcohols, aldehydes, ethers, esters or ketones having an olefinic or cycloolefinic type of unsaturation except perchloroethylene: 5 percent;

(b) A combination of aromatic compounds with eight or more carbon atoms to the molecule except ethylbenzene, methyl benzoate and phenyl acetate: eight percent (8%);

(c) A combination of ethylbenzene, ketones having branched hydrocarbon structures, trichloroethylene or toluene: twenty percent (20%).

Whenever any organic solvent or any constituent of an organic solvent may be classified from its chemical structure into more than one of the above groups of organic compounds, it shall be considered as a member of the most reactive chemical group, that is, that group having the least allowable percent of the total volume of solvents.

(GG) PM-10 - The particulate matter with an aerodynamic diameter smaller than or equal to 10 microns as measured by applicable State and Federal reference test methods.

(HH) Process Weight - The total weight of all materials introduced into any specific process which may discharge contaminants into the atmosphere. Solid fuels charged will be considered as part of the process weight, but liquid gaseous fuels and air will not.

(II) Process Weight Per Hour - The total process weight divided by the number of hours in one complete operation from the beginning of any given process to the completion thereof, excluding any time during which the equipment is idle.

(JJ) Rebuilt Equipment - Any contrivance or its components which have undergone repair or replacement of parts and which are subject to air pollution control requirements.

(KK) Reduction Of Animal Matter - Any heated process, used for rendering, cooking, drying, dehydrating, digesting, evaporating and protein concentrating of animal matter.

(LL) Regulation - One of the major subdivisions of the Rules of the Antelope Valley Air Quality Management District.

(MM) Rule - A rule of the Antelope Valley Air Quality Management District.

(NN) Schedule Of Increments Of Progress - A statement of dates when various steps are to be taken to bring a source of air contaminants into compliance with emission standards and shall include, to the extent feasible, the following:

(a) The dates of submittal of the final plan for the control of emissions of air contaminants from that source to the District.

(b) The date by which contracts for emission control systems or process modifications will be awarded, or the date by which orders will be issued for the purchase of component parts to accomplish emission control or process modification.

(c) The date of initiation of on-site construction or installation of emission control equipment or process change.

(d) The date by which on-site construction or installation of emission control equipment or process modification is to be completed.

(e) The date by which final compliance is to be achieved.

(f) Such other dates by which other appropriate and necessary steps shall be taken to permit close and effective supervision of progress toward timely compliance.

(OO) Small Business - A business which is independently owned and operated and meets the following criteria, or if affiliated with another concern, the combined activities of both concerns shall meet these criteria:

(a) the number of employees is ten (10) or less; and

(b) the total gross annual receipts are $500,000 or less; or

(c) not-for-profit training center.

For the purpose of qualifying for assistance offered by the District's Small Business Assistance Office only, a small business means a business with total gross annual receipts of $5,000,000 or less, or a business with a total number of employees of 100 or less.

(PP) Solid Particulate Matter - Particulate matter which exists as a solid at standard conditions.

(QQ) Source Area - That specified geographic area in which air contaminants are emitted.

(RR) Standard Conditions - A gas temperature of 60^{o}F and a gas pressure of 760 mm Hg (14.7 pounds per square inch) absolute.

(SS) Submerged Fill Pipe - Any fill pipe the discharge opening of which is completely submerged when the liquid level is 15 centimeters (6 inches) above the bottom of the container; or when applied to a container which is loaded from the side, it means any fill

pipe the opening of which is entirely submerged when the liquid level is 45 centimeters (18 inches) above the bottom of the container.

(TT) Vehicle - A device by which any person or property may be propelled, moved, or drawn upon a highway, excepting a device moved by human power or used exclusively upon stationary rails or tracks.

(UU) Volatile Organic Compound (VOC) - Any volatile compound of carbon, excluding carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates, ammonium carbonate, and exempt compounds as defined in section (Q) above. *[Suggested by comment letter of 3/17/05. Derived from Rule 1301(ZZZ)]*

[SIP: Approved 12/31/98, 63 FR 72197, 40 CFR 52.220.(c)(254)(i)(E)(2); Approved 11/27/90, 55 FR49281, _____; Approved _____, 40 CFR 52.220(c)(44)(v)(A); Approved _____, 40 CFR 52.220(c)(41)(xiv)(A) excluding term "agricultural burning"; Approved 9/8/78, 43 FR 40011, 40 CFR 52.220(c)(39)(iii)(c); Approved 6/14/78, 43 FR 25684, 40 CFR 52.220(c)(37)(i)(A)]

(**Adopted:** 1/9/76; **Amended:** 9/16/97)

Rule 103
Definition of Geographical Areas

(A) District Boundaries

1. The district boundaries include the desert portion of Los Angeles County (as described in Section (B) below).

(B) Desert Portion of Los Angeles County

1. That portion of Los Angeles County which lies north and east of a line described as follows:

   Beginning at the Los Angeles-San Bernardino County boundary and running west along the township line common to T.3N and T.2N, San Bernardino Base and Meridian; then north along the range line common to R.8W and R.9W; then west along the township line common to T.4N and T.3N; then north along the range line common to R.12W and R.13W to the southeast corner of Section 12,T.5N, R.13W; then west along the south boundaries of Sections 12, 11, 10, 9, 8, 7, T.5N, R.13W to the boundary of the Angeles National Forest which is collinear with the range line common to R.13W and R.14W; then north and west along the Angeles National Forest boundary to the point of intersection with the township line common to T.7N and T.6N (point is at the northwest corner of Section 4 in T.6N, R.14W); then west along the township line common to T.7N and T.6N; then north along the range line common to R.15W and R.16W to the southeast corner of Section 13, T.7N, R.16W; then along the south boundaries of Sections 13, 14, 15, 16, 17, 18, T.7N, R.16W; then north along the range line common to R.16W and R.17W to the north boundary of the Angeles National Forest (collinear with township line common to T.8N and T.7N) then west and north along the Angeles National Forest boundary to the point of intersection with the south boundary of the Rancho La Liebre Land Grant; then west and north along this land grant boundary to the Los Angeles-Kern County boundary.

[SIP: Submitted as amended on 9/16/97; Approved 9/8/78 43 FR 40011, 40 CFR 52.220(c)(iv)(c); Approved 6/14/78 43FR 25684, 40 CFR 52.220(c)(31)(vi)(B)]

(**Adopted:** 1/9/76; **Readopted by Statute:** 07/01/97; **Readopted by Statute:** 01/01/02; **Amended:** 5/17/05)

RULE 106
Increments of Progress

(A) Unless and until the Hearing Board authorizes such operation, no person shall operate any equipment if such person fails to achieve any scheduled increment of progress established pursuant to Sections 42358 or 41703 of the Health and Safety Code of the State of California.

(B) Whenever the Air Quality Management District Board adopts or modifies a rule in Regulation IV of these regulations and such new rule or modified rule contains a compliance schedule with increments of progress, the owner or operator of the affected equipment shall, within five (5) days after each of the dates specified in the compliance schedule, certify to the Air Pollution Control Officer (APCO), in the form and manner specified by the APCO, that the increments of progress have or have not been achieved.

(C) Whenever the Hearing Board approves a compliance schedule with increments of progress, the owner or operator of the affected equipment shall, within five days after each of the dates specified in the compliance schedule, certify to the APCO, in the form and manner specified, that the increments of progress have or have not been achieved.

[SIP: Approved: 11/27/90, 55 FR 49281, _____; Approved: 9/8/78, 43 FR 40011, 40 CFR 52.220(c)(39)(iii)(C); Approved: 6/14/78, 43 FR 25684, 40 CFR 52.220(c)(31)(vi)(B)]

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(**Adopted**: 05/15/12)

RULE 107
Certification of Submissions and Emission Statements

(A) Submission Certification

(1) All official documents submitted to the Antelope Valley Air Pollution Control District (District) shall contain a certification signed and dated by a responsible official of the company. This certification must attest that the information contained in the submitted documents is accurate to the best knowledge of the individual certifying the submission. The requirements of this Section apply to, but are not limited to, the emissions statements required in Section (B)(1).

(B) Emission Statement

(1) In accordance with the requirements of the 1990 Clean Air Act (Section 182 (a)(3)(B)(i)), the owner or operator of any stationary source that emits or may emit oxides of nitrogen or Volatile Organic Compounds (VOCs) shall provide the Air Pollution Control Officer (APCO) with a written statement showing actual emissions of oxides of nitrogen and VOCs from that source. At a minimum the emission statement shall be submitted as specified in the transaction format detailed in the California Air Resources Board's "California Emission Inventory Development and Reporting System." The emission statement shall contain emission data for the time period specified by the APCO. Emission statements shall be submitted annually.

(2) The APCO may waive the requirements of Section (B)(1) for any class or category of stationary sources which emit less than 25 tons per year of oxides of nitrogen or reactive organic compounds. The waiver is contingent on the District providing the California Air Resources Board with an inventory of sources emitting greater than 10 tons per year of nitrogen oxides or VOCs based on the use of emission factors acceptable to the California Air Resources Board and the United States Environmental Protection Agency.

See SIP Table at http://www.avaqmd.ca.gov/Modules/ShowDocument.aspx?documentid=921

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(**Adopted:** 3/2/90; **Amended**: 4/ 6/90; Readopted by Statute: 07/01/97; Readopted by Statue 01/01/02; **Amended:** 5/17/05)

RULE 108
Alternative Emission Control Plans

(A) Purpose

An owner or operator may demonstrate compliance with an emission limitation of a specific District Rule by means of an Alternative Emission Control Plan (AECP).

(B) Applicability

(1) The provisions of this rule shall apply to an owner or operator of an existing stationary source emitting, or capable of emitting, a volatile organic compound (VOC), electing to comply by means of an AECP and subject to one of the following District Rules:

1104 - Wood Flat Stock Coating Operations,
[Rule rescinded 1/20/98]
1107 - Coating of Metal Parts and Products,
1115 - Motor Vehicle Assembly Line Coating Operations,
1124 - Aerospace Assembly and Component Coating Operations,
[Rule rescinded 2/17/04]
1128 - Paper, Fabric, and Film Coating Operations,
1130 - Graphic Arts,
1136 - Wood Products Coatings,
1145 - Plastic, Rubber, and Glass Coatings,
1151 - Motor Vehicle and Mobile Equipment Non-assembly Line Coating Operations,
1164 - Semiconductor Manufacturing,
1168 - Control of Volatile Organic Compound Emissions from Adhesive Application.

(2) The provisions of an AECP shall be submitted by the District to the California Air Resources Board (CARB) for submittal to the United States Environmental Protection Agency (USEPA) as a source-specific revision to the State Implementation Plan (SIP). Sources which obtain an approved AECP from the District remain subject to federal enforcement of existing SIP limits pending federal approval of the AECP as a source-specific SIP revision pursuant to 42 U.S.C. §7410(a)(3)(a) (Federal Clean Air Act §110 (a)(3)(A). *[Conform to AVAQMD rule format]*

(3) The provisions of this rule shall apply to all stationary sources of VOC emissions currently complying with a District rule by means of an AECP or Equivalency Plan. A stationary source may continue to achieve compliance through an existing Plan for a

period not to exceed One Hundred Eighty (180) days from date of Plan submission in accordance with the schedule set forth in paragraph (E). *[Conform to AVAQMD rule format]*

(4) Each permit unit to be included in an AECP shall have been in operation pursuant to District permit or pursuant to District Rule 219 prior to the submittal of the AECP application. *[Conform to AVAQMD rule format]*

(C) Definitions

(1) Alternative Emission Control Plan (AECP) - A plan which allows a source to demonstrate an alternative method of rule compliance. *[Conforms to AVAQMD Rule Format]*

(2) Baseline Emissions - The product of three (3) factors expressed as lbs VOC/day (see (D)(7)). The factors are emissions rate, capacity utilization, and hours of operation. *[Conform to AVAQMD rule format]*

(3) Emission Reductions:

(a) Enforceable - The operating conditions which qualify the AECP for approval are included in a Permit to Operate enforced by the District and the AECP is submitted as a source-specific SIP revision. *[Conform to AVAQMD rule format]*

(b) Permanent - The AECP contains permit conditions which ensure the emission reductions from the baseline are achieved for each and every operating day and the AECP is submitted as a source-specific SIP revision. *[Conform to AVAQMD rule format]*

(c) Quantifiable - Emissions must be able to be measured before and after the reduction using the same test method and averaging time. *[Conform to AVAQMD rule format]*

(c) Surplus - The emission reductions are not required by current SIP regulations, are not a measure in Tier I of the Air Quality Management Plan, or relied upon for SIP planning purposes, and are not used by the source to meet any other regulatory requirements. Surplus emission reductions shall be determined by using an appropriate baseline as described under (D)(7). *[Conform to AVAQMD rule format]*

(4) Equivalency Plan - An AECP. *[Conform to AVAQMD rule format]*

(5) Modification - Any physical change, change in method of operation of, or addition to, an existing stationary source, requiring an application for permit to construct. Routine

maintenance and/or repair shall not be considered a physical change. A change in the method of operation of equipment, unless previously limited by an enforceable permit condition, shall not include: *[Conform to AVAQMD rule format]*

(a) an increase in the production rate, unless such increase will cause the maximum design capacity of the equipment to be exceeded; or

(b) an increase in the hours of operation; or

(c) a change in ownership of a source.

(6) Permit Unit - Any article, machine, equipment, or other contrivance, or combination thereof, which may cause or control the issuance of air contaminants, and which: *[Conform to AVAQMD rule format]*

(a) requires a written permit pursuant to Rules 201 and/or 203; or

(b) is in operation pursuant to the provisions of Rule 219.

(7) Plan - An Alternative Emission Control Plan. *[Conform to AVAQMD rule format]*

(8) Reasonably Available Control Technology (RACT) - The lowest emission limit established through District regulations for a particular source. *[Conform to AVAQMD rule format]*

(9) State Implementation Plan (SIP) - The State (District) prepared plan, approved by USEPA, detailing how National Ambient Air Quality Standards will be achieved and maintained. *[Conform to AVAQMD rule format]*

(10) Stationary Source - Any permit unit or grouping of permit units or other air contaminant-emitting activities which are located on one or more contiguous properties within the District, in actual physical contact or separated solely by a public roadway or other public right-of-way, and which are owned or operated by the same person (or by persons under common control). Such above-described groupings, if non-contiguous, but connected only by land carrying a pipeline, shall not be considered one stationary source. *[Conform to AVAQMD rule format]*

(11) Transfer Efficiency (TE) - The ratio of the weight or volume of coating solids deposited on an object to the total weight or volume of coating solids used in a coating application step expressed as a percentage. *[Conform to AVAQMD rule format]*

(12) Volatile Organic Compound (VOC) - Any volatile compound of carbon, excluding, carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates, ammonium carbonate and those compounds listed in 40 CFR 51.100(s)(1). *[Suggested by comment letter of 3/17/05. Derived from Rule 1301(ZZZ)]*

(D) Requirements

(1) An owner or operator may demonstrate compliance with a specific District rule by means of an AECP, provided that the owner or operator:

(a) submits an application for a Plan which is enforceable on a twenty-four (24) hour daily emissions basis; and *[Conform to AVAQMD rule format]*

(b) submits applications and receives new Permits to Operate for permit units included in the Plan; and

(c) prior to Plan implementation, receives written approval of the Plan from the Air Pollution Control Officer (APCO) with operating conditions included in a Permit to Operate enforced by the District. Permit conditions may specify parameters for conducting source tests of control equipment in order to determine compliance.

(2) Existing permits shall be surrendered and new permits incorporating the provisions of the AECP shall be obtained. Notwithstanding provisions of District Rule 219, if a Plan encompasses operation of permit units not previously subject to permit, such permit units shall lose their exemption and require permits. *[Conform to AVAQMD rule format]*

(3) The owner or operator of a stationary source of VOC emissions shall be subject to the applicable rule's specific requirements pending District approval of a submitted Plan unless the source is operating under the provision of subparagraph (b)(3).

(4) The AECP shall provide, as a minimum, all data, records, and other information necessary to determine eligibility for alternative emission control including but not limited to:

(a) applicable District rule; and

(b) a list of equipment subject to alternative emission control; and

(c) calculations showing baseline emissions for each piece of equipment included in the Plan; and

(d) calculations showing how the required 20 percent (20%) emission reduction will be obtained; and *[Conform to AVAQMD rule format]*

(e) an explanation of how the proposed 20 percent (20%) emission reduction will be enforceable, permanent, quantifiable, and surplus; and *[Conform to AVAQMD rule format]*

(f) amounts of VOC-containing materials to be used and their VOC concentrations for each operation.

(5) The owner or operator operating under an approved Plan shall maintain daily operating records, information on operations, source tests, laboratory analyses, monitoring data, and other information in a manner and form consistent with determining compliance with the Plan on a twenty-four (24) hour basis. Such records and reports shall be retained for a period of not less than two (2) years and shall be submitted to the District upon request. *[Conform to AVAQMD rule format]*

(6) The Plan shall result in at least a twenty percent (20%) reduction in VOC baseline emissions, thus producing a net air quality benefit and establishing an AECP emissions limit. *[Conform to AVAQMD rule format]*

(7) Baseline emissions are the product of:

Emission rate (ER) (lbs VOC/gal of solids)
Capacity utilization (CU) (gals of solids/hour)
Hours of operations (H) (hrs/day)

Baseline emissions = ER x CU x H = (lbs VOC/day)

Baseline emission calculations shall include data for permit units included in the Plan. Calculations shall use the lowest of either (1) the actual emission rate, (2) SIP allowable emission limit, or (3) RACT limits (as defined by the District regulations as of the date of application for credit). Also, calculations shall use the lowest of either actual or SIP allowable values for the capacity utilization and hours of operation factors. The hours of operation may be expressed as an hourly usage over a representative time, as approved by the APCO not to exceed twenty-four (24) hours. Sources lacking specific hours of operation records may substitute daily records (two (2) years) of VOC emissions from coatings and solvents usage expressed as lbs VOC/day. Actual values for the capacity utilization and hours of operation shall be based on the average from data for two (2) years directly preceding the source's application for a Plan, unless another two (2)-year period can be shown to the satisfaction of the APCO and USEPA to more accurately represent the source's normal allowable operations. No credit will be given for down-time. *[Conform to AVAQMD rule format]*

(8) Emission reductions shall consist of VOC emissions only and shall be enforceable, permanent, quantifiable, and surplus.

(9) For Plans encompassing VOC emissions from coating operations, the emission reductions shall be demonstrated on a solids basis, i.e. averaging shall be performed using pounds of VOC emitted per gallon of solids. The VOC content of the coating is as applied including any thinner added before or during application. Water and exempt solvents shall be excluded in this calculation.

(10) Emission reductions shall consist of emissions resulting from activities governed by only one source-specific District rule for which the Plan is submitted.

(11) Equipment subject to the Plan shall be located within the same stationary source.

(12) If the emission reduction required by the AECP is accomplished through equipment shutdown or production curtailment, the permanency of the reduction shall be ensured by permit conditions limiting the total VOC emissions from the entire facility. Thus, all future increases in VOC emissions from the facility shall require complete emission reduction offsets, regardless of the provisions of Regulation XIII.

(13) Plans using add-on controls to achieve emission reductions shall specify test methods for both the emission collection system and the control system. Add-on controls shall not be considered part of an AECP unless incorporated in an emissions averaging approach to compliance.

(E) Compliance Schedule

(1) For sources operating under District approved AECPs at the time of this rule's adoption, the following schedule shall apply:

(a) Sources seeking compliance with Rules 1124 - Aerospace Assembly and Component Coating Operations; 1125 - Metal Container, Closure, and Coil Coating Operations; 1128 - Paper, Fabric, and Film Coating Operations; 1130 - Graphic Arts; 1136 - Wood Products Coatings; 1145 - Plastic, Rubber, and Glass Coatings; 1151 - Motor Vehicle and Mobile Equipment Non-assembly Line Coating Operations; 1164 - Semiconductor Manufacturing; and 1168 - Control of Volatile Organic Compound Emissions from Adhesive Application shall submit Plans consistent with this rule's requirements within one hundred twenty (120) days of rule adoption. The District will move to approve or deny such Plans within one hundred eighty (180) days of submittal; or *[Conform to AVAQMD rule format]*

(b) Sources seeking compliance with Rules 1104 - Wood Flat Stock Coating Operations, 1106 - Marine Coating Operations, Rules 1107 - Coating of Metal Parts and Products, and 1115 - Motor Vehicle Assembly Line Coating Operations shall submit Plans consistent with this rule's requirements within one hundred eighty (180) days of rule adoption. The District will move to approve or deny such Plans within one hundred eighty (180) days of submittal. *[Conform to AVAQMD rule format]*

(2) New Plans and Plans updated subsequent to any initial plans submittals required by the adoption of this rule shall be submitted:

(a) Prior to modification of equipment subject to alternative emission control; or

(b) Within sixty (60) days following the date the specific rule relating to the Plan is amended if the rule amendment is pertinent to the Plan; or *[Conform to AVAQMD rule format]*

(c) Not less than ninety (90) days prior to implementation of a specific rule's future compliance date which is pertinent to the Plan, but which the Plan does not address. *[Conform to AVAQMD rule format]*

(F) Restrictions

(1) A Plan shall not result in a net increase in any baseline emission of an air pollutant regulated, proposed for regulation, listed, or the subject of a notice-of-intent-to-list under 42 U.S.C. §7412 (Federal Clean Air Act §112) - National Emission Standards for Hazardous Air Pollutants (NESHAP). The Plan shall not be used to meet any NESHAP requirements. The baseline emissions of a hazardous pollutant shall be determined by the lower of either actual or NESHAP's allowable emissions. *[Conform to AVAQMD rule format]*

(2) Plans shall not include credits from emission reductions made prior to application for the Plan. This includes emission reductions from equipment shutdown and production curtailment. *[Correct typo.]*

(3) Plans shall not include credits from emission reductions required by subsequent amendments to the rules specified in (B)(1).

(4) Plans shall not include credits from emission reductions calculated through solvent usage for surface preparation, cleanup and/or stripping operations.

(5) TE shall not be included as an alternative means of control.

(6) Emission reductions from Plans shall not be used to meet requirements of New Source Performance Standards (NSPS).

[SIP: Approved 8/30/93, 58 FR 45445, 40 CFR 52.220(c)(182)(i)(A)(3)]

(**Adopted:** 5/5/89; **Amended:** 3/6/92; **Readopted by Statute:** 07/01/97; **Readopted by Statute:** 01/01/02; **Amended:** 5/17/05; **Amended**: 04/20/10

RULE 109
Recordkeeping for Volatile Organic Compound Emissions

(A) General

(1) Purpose

(a) The purpose of this rule is to ensure that adequate records of volatile organic compound use are made and maintained.

(2) Applicability

(a) The provisions of this rule shall apply to an owner or operator of a stationary source within the District conducting operations, which include the use of adhesives, coatings, solvents, and/or graphic arts materials, when records are required to determine a District rule's applicability or source's exemption from a rule, rule compliance, or specifically as a Permit to Operate or Permit to Construct condition.

(b) District rules requiring recordkeeping as outlined by District Rule 109 include, but are not limited to, the following:

442 - Usage of Solvents
1102 - Petroleum Solvent Dry Cleaners
1104 - Wood Flat Stock Coating Operations,
1107 - Coating of Metal Parts and Products,
1122 - Solvent Cleaners (Degreasers),
1124 - Aerospace Assembly and Component Coating Operations,
1128 - Paper, Fabric, and Film Coating Operations,
1130 - Graphic Arts,
1130.1 - Screen Printing Operations
1136 - Wood Products Coatings,
1145 - Plastic, Rubber, and Glass Coatings and Adhesives,
1151 - Motor Vehicle and Mobile Equipment Non-Assembly Line Coating Operations,
1162 - Polyester Resin Operations
1164 - Semiconductor Manufacturing,
1168 - Control of Volatile Organic Compound Emissions from Adhesive Applications.
1171 - Solvent Cleaning Operations

(B) Definitions

(1) Exempt Compounds - Any compound listed in 40 CFR 51.100(s)(1).

(2) Facility - Any permit unit, group of permit units, non-permitted equipment or any combination thereof which emits or may emit an Air Pollutant; and belongs to a single major industrial group in the Standard Industrial Classification manual; and is located on a single parcel of land or on contiguous property within the District; and which is owned or operated by the same person or by persons under common control.

(3) Graphic Arts Materials - Any inks, coatings, adhesives, fountain solutions, thinners retarders, or cleaning solutions used in printing or related coating or laminating processes.

(4) Low Solids Adhesive, Adhesive Primer, or Stain - An adhesive, adhesive primer or stain which has less than one pound of solids per gallon of material.

(5) Permit Unit - Any article, machine, equipment, or other contrivance, or combination thereof, which may cause the issuance or control the issuance of air contaminants, and which:

(a) Requires a written permit pursuant to the provisions of District Rules 201 and/or 203; or

(b) Is in operation pursuant to the provisions of District Rule 219.

(6) South Coast Air Quality Management District (SCAQMD) - The air quality district created pursuant to Division 26, Part 3, Chapter 5.5 of the California Health & Safety Code (commencing with §40400).

(7) Stationary Source - Any permit unit or grouping of permit units or other air contaminant-emitting activities which are located on one or more contiguous properties within the District, in actual physical contact or separated solely by a public roadway or other public right-of-way, and are owned or operated by the same person (or by persons under common control). Such above-described groupings, if non-contiguous, but connected only by land carrying a pipeline, shall not be considered one stationary source.

(8) Volatile Organic Compound (VOC) - Any volatile compound of carbon, excluding carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates, ammonium carbonate, and exempt compounds as defined in subsection (B)(1) above.

(C) Daily Recordkeeping Requirements

(1) An owner or operator of a stationary source using adhesives, coatings, solvents, and/or graphic arts materials and subject to this rule shall maintain daily records of operations for the most recent two (2) year period. The records shall be retained on the premises of the affected operation for a period of not less than two

(2) years. Said records shall be made available to the District upon request. The records shall include, but not be limited to, the following:

(a) Each applicable District rule number pertinent to the operation for which records are being maintained;

(b) A list of the permit units involved in the operation(s) using adhesives, coatings, solvents, and/or graphic arts materials;

(c) The method of application and substrate type;

(d) The amount and type of adhesive, coating (including catalyst and reducer), solvent, and/or graphic arts material used in each permit unit or dispensing station (when permitted equipment is not involved), including exempt compounds (containers of one pint or less may be recorded in an alternative manner including but not limited to assuming full consumption on day of first use and/or calculating an average daily consumption by determining the number of operating days a single pint container of material was in active use at a facility;

(e) The VOC content in each adhesive, coating (including catalyst and reducer), solvent, and/or graphic arts material;

(f) The amount of diluent, surface preparation, clean-up, or wash-up solvent (including exempt compounds) used and the VOC content of each (containers of one pint or less may be recorded in an alternative manner);

(g) Where applicable, the vapor pressure of solvents used as surface cleaners; and

(h) Where applicable, oven temperature (for coating operations).

(D) Test Methods

(1) VOC content shall either be calculated using a percent solids basis (less water and exempt solvents) for adhesives, coatings, and inks; or testing shall be done using USEPA Reference Method 24 (Determination of Volatile Matter Content, Water Content, Density Volume Solids, and Weight Solids of Surface Coatings, Code of Federal Regulations Title 40, Part 60, Appendix A, 7/1/85 edition). Analysis done according to USEPA Method 24 shall utilize Procedure B of ASTM Method D-2369, referenced within USEPA Method 24. The exempt solvent content shall be determined using SCAQMD Test Methods 302 and 303 (SCAQMD "Laboratory Methods of Analysis for Enforcement Samples" manual). Alternatively, the VOC content may be determined using SCAQMD Test Methods 302, 303, and 304. The test method shall be documented. The VOC content may be supplied by a Material Safety Data Sheet (MSDS) or data sheet provided the test methods described above are used and specified on the MSDS or data sheet.

(2) VOC content and density of rotogravure publication inks shall be determined by USEPA Reference Method 24A (Determination of Volatile Matter Content and Density of Printing Inks and Related Coatings, Code of Federal Regulations Title 40, Part 60, Appendix A, 7/1/85 edition). The exempt solvent content shall be determined using SCAQMD Test Methods 302 and 303 (SCAQMD "Laboratory Methods of Analysis for Enforcement Samples" manual). Alternatively, the VOC content may be determined using SCAQMD Test Methods 302, 303, and 304.

(3) VOC content for low solid adhesive, adhesive primer, or stain shall be calculated by the method used to calculate the "Grams of VOC per Liter of Material" as specified in District Rules 1136 and 1168.

(4) Any applicable alternative test method may be used so long as such method has been approved by USEPA, CARB and the APCO.

(5) When more than one test method or set of methods are specified for any testing, noncompliance with any requirement of this rule established by any one of the specified test methods or set of test methods shall constitute a violation of this rule.

The following classes of 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 sulfur bonds only to carbon and fluorine, will be analyzed as exempt compounds, only at such time as manufacturers specify which individual compounds are used in the coating formulations and identify the test methods, which, prior to such analysis, have been approved by the USEPA and the District, that can be used to quantify the amounts of each exempt compound.

(E) Exemptions

(1) The provisions of this rule shall not apply to the application of materials that contain less than 20 g/l of VOC.

[SIP: Submitted as amended mm/dd/yy on mm/dd/yy; Approved: 4/13/95, 60 FR 18751, 40 CFR 52.220(c)(189)(i)(A)(6); Limited Approval/Disapproval 8/30/95, 58 FR 45444, 40 CFR 52.220(c)(182)(i)(A)(2)]

[(Adopted: 1/9/76; Amended: 1/5/90; Amended: 8/19/97)]

Rule 201
Permit to Construct

A person shall not build, erect, install, alter or replace any equipment, the use of which may cause the issuance of air contaminants or the use of which may eliminate, reduce or control the issuance of air contaminants without first obtaining written authorization for such construction from the Air Pollution Control Officer. A permit to construct shall remain in effect until the permit to operate the equipment for which the application was filed is granted or denied, or the application is canceled.

[SIP: Submitted as amended on 8/19/97; Approved 11/9/78, 43 FR 52237, 40 CFR 52.220(c)(39)(iii)(B); Approved 11/9/78, 43 FR 52237, 40 CFR 52.220(c)(31)(vi)(C)]

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

(Adopted January 9, 1976)(Amended May 7,1976)

RULE 202. TEMPORARY PERMIT TO OPERATE

a. New Equipment - A person shall notify the Air Pollution Control Officer before operating or using equipment granted a permit to construct. Upon such notification, the permit to construct shall serve as a temporary permit for operation of the equipment until the permit to operate is granted or denied. The equipment shall not be operated contrary to the conditions specified in the permit to construct.
b. Altered Equipment - The permit to construct granted to modify equipment having a valid permit to operate shall serve as a temporary permit for operation of the equipment until a new permit to operate is granted or denied. The altered equipment shall not be operated contrary to the conditions specified in the permit to construct. A person must notify the Air Pollution Control Officer when construction of the modification has been completed.
c. Existing Equipment - When an application for permit to operate is filed for existing equipment, the application shall serve as a temporary permit for operation of the equipment.

   If the equipment was previously operated under permit and had not been altered, it shall not be operated under a temporary permit contrary to the conditions specified in the previous permit to operate.

[(Adopted: 1/ 9/76; Amended: 1/5/90; Amended: 8/19/97)]

Rule 203
Permit to Operate

A person shall not operate or use any equipment, the use of which may cause the issuance of air contaminants, or the use of which may reduce or control the issuance of air contaminants, without first obtaining a written permit to operate from the Air Pollution Control Officer or except as provided in Rule 202. The equipment shall not be operated contrary to the conditions specified in the permit to operate.

[SIP: Submitted as amended on 8/19/97; Approved 11/9/78, 43 FR 52237, 40 CFR 52.220(c)(39)(iii)(B); Approved 11/9/78, 40 CFR 52.220(c)(31)(vi)(C)]

[(Adopted: 1/9/76; Amended: 1/4/85; Amended: 3/6/92; Amended: 10/8/93; Amended: 8/19/97)]

Rule 204
Permit Conditions

To assure compliance with all applicable regulations, the Air Pollution Control Officer may impose written conditions on any permit. The Air Pollution Control Officer may, after 30-day notice to the permittee, add or amend written conditions on any permit upon annual renewal to assure compliance with and enforceability of any applicable rule or regulation. Additional provisions, as required by Title V of the federal Clean Air Act, for the reopening of facility permits are specified in Regulation XXX. Commencing work or operation under such revised permits shall be deemed acceptance of all the conditions so specified.

[SIP: Submitted as amended on 8/19/97; Approved 11/9/78, 43 FR 52237, 40 CFR 52.220(c)(39)(iii)(B); Approved 11/9/78, 43 FR 52237, 40 CFR 52.220(c)(31)(vi)(C)]

[(**Adopted:** 1/9/76; **Amended:** 1/5/90; **Amended:** 8/19/97)]

Rule 205
Expiration of Permits to Construct

A permit to construct shall expire one year from the date of issuance unless an extension of time has been approved in writing by the Air Pollution Control Officer.

[SIP: Submitted as amended on 8/19/97; Approved 11/9/78, 43 FR 52237, 40 CFR 52.220(c)(39)(iii)(B); Approved 11/9/78, 43 FR 52237, 40 CFR 52.220(c)(31)(vi)(C)]

(Adopted January 9, 1976)

RULE 207. ALTERING OR FALSIFYING OF PERMIT

A person shall not willfully deface, alter, forge, or falsify any permit issued under these rules.

(**Adopted:** 10/8/76; **Amended:** 1/5/90; **Readopted by Statute:** 07/01/97; **Readopted by Statute:** 01/01/02; **Amended:** 5/17/05)

RULE 208
PERMIT FOR OPEN BURNING

A person, required to obtain a permit for open burning pursuant to Rule 444, shall not set or allow any open outdoor fire without first having applied for and been issued a written permit for such fire by the Air Pollution Control Officer.

[SIP: Submitted as amended 1/5/90 on 12/31/90; Approved 9/8/78, 43 FR 40011, 40 CFR 52.220(c)(39)(iii)(C)]

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(**Adopted:** 1/9/76; **Amended:** 7/6/84; **Amended:** 5/17/85; **Amended:** 5/1/87; **Amended:** 7/10/87; **Amended:** 3/3/89; **Amended:** 6/28/90; **Amended:** 9/6/91; **Amended:** 8/12/94; **Amended:** 6/7/95; **Readopted by Statute:** 07/01/97; **Readopted by Statute:** 01/01/02; **Amended:** 5/17/05)

RULE 212
Standards For Approving Permits

(A) The Air Pollution Control Officer (APCO) or designee shall deny a Permit to Construct or a Permit to Operate, except as provided in District Rule 204, unless the applicant shows that the equipment, the use of which may cause the issuance of air contaminants or the use of which may eliminate, reduce, or control the issuance of air contaminants, is so designed, controlled, or equipped with such air pollution control equipment that it may be expected to operate without emitting air contaminants in violation of §41700, 41701, or 44300 (et sec.) of the State Health and Safety Code or of these rules.

(B) If the APCO or designee finds that the equipment has not been constructed in accordance with the permit and provides less effective air pollution control than the equipment specified in the Permit to Construct, he shall deny the Permit to Operate.

(C) Prior to granting a Permit to Construct for a significant project, all addresses within the area described in section (d) shall be notified of the APCO's or designee's intent to grant a Permit to Construct at least thirty (30) days prior to the date action is to be taken on the application. For the purpose of this rule, significant projects will consist of:

(1) all new or modified permit units that may emit air contaminants located within 1000 feet from the outer boundary of a school. This subdivision shall not apply to modification of an existing facility if the APCO or designee determines that the modification will result in a reduction of emissions of air contaminants from the facility and no increase in health risk at any receptor location. This paragraph shall not apply to modifications that have no potential to affect emissions;

(2) all new or modified facilities which have on-site emission increases exceeding any of the daily maximums specified in subdivision (g) of this rule; and

(3) all new or modified permit units with increases in emissions of toxic air contaminants, for which the APCO or designee has made a determination that a person may be exposed to an individual cancer risk greater than, or equal to, one in a million (1×10^{-6}) during a lifetime (70 years) period, or may be exposed to quantities or concentrations of other substances that pose a potential risk of nuisance. Toxic and potentially toxic air contaminants are substances subject to District Rule 1401, or any other material determined by the APCO or designee to be potentially toxic. This paragraph shall not apply if the APCO or designee determines that modifications to the existing facility will not result in an increase in health risk at any receptor location.

(D) Except as provided for in subdivision (G), the notification of the proposed construction of a significant project, which is to be prepared by the District, is to contain sufficient detail to fully describe the project. The applicant shall provide verification to the APCO or designee that public notice has been distributed as required by this subdivision. In the case of notifications performed under paragraphs (C)(2) and (c)(3), the applicant for the Permit to Construct shall be responsible for the distribution of the public notice to each address within a 1/4 mile radius of the project or such other area as determined appropriate by the APCO or designee. In the case of notifications performed under paragraph (C)(1), distribution of the public notice shall be to the parents of children in any school within 1/4 mile of the facility and the applicant shall provide distribution of the public notice to each address within a radius of 750 feet from the outer property line of the proposed new or modified facility.

(E) Any person may file a written request for notice of any decision or action pertaining to the issuance of a Permit to Construct. The APCO or designee shall provide mailed notice of such decision or action to any person who has filed a written request for notification. Requests for notice shall be filed pursuant to procedures established by the APCO or designee. The notice shall be mailed at the time that the APCO or designee notifies the permit applicant of the decision or action. The ten (10) day period to appeal, specified in District Rule 216(b), shall commence on the third day following mailing of the notice pursuant to this subdivision. The requirements for public notice pursuant to this subdivision are fulfilled if the APCO makes a good faith effort to follow procedures established pursuant to this subdivision for giving notice and, in such circumstances, failure of any person to receive the notice shall not affect the validity of any permit subsequently issued by the APCO or designee.

(F) An application for a Permit to Operate, for a permit unit installed or constructed without a required Permit to Construct, shall be subject to the requirements of this rule.

(G) For new or modified sources subject to Regulation XIII, which undergo construction or modifications resulting in an emissions increase exceeding any of the daily maximums specified as follows:

Air Contaminant	Daily Maximum in lbs per Day
Volatile Organic Compounds	30
Nitrogen Oxides	40
PM_{10}	30
Sulfur Dioxide	60
Carbon Monoxide	220
Lead	3

the process for public notification and comment shall include all of the applicable provisions of 40 CFR §51.161(b), and 40 CFR §124.10. The federal public notice and comment procedures for these facilities require that the public notice be distributed to the broadest possible scope of interested parties, and include at a minimum:

(1) Availability of information submitted by the owner or operator and of District analyses of the effect on air quality for public inspection in at least one location in the area affected;

(2) Notice by prominent advertisement in the area affected of the location of the source information and the District's analyses of the effect on air quality;

(3) Mailing a copy of the notice required in paragraph (2) to the following persons: The applicant, the Administrator of USEPA through RegionIX, the California Air Resources Board, affected local air pollution control districts, the chief executives of the city and county or the onshore area that is geographically closest to where the major stationary source or major modification would be located, any comprehensive regional land use planning agency, and State, Federal Land Manager, or Indian Governing Body whose lands may be affected by emissions from the regulated activity;

(4) A thirty (30) day period for submittal of public comments.

[SIP: Approved 2/4/96, 61 FR 64291, 40 CFR 52.220(c)(240)(i)(A)(1); Approved _____, _____, 40 CFR 52.220(c)(173)(i)(A)(1); Approved 11/9/78, 43 FR 52237, 40 CFR 52.220(c)(31)(vi)(c) and 52.220(c)(39)(iii)(B)]

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(Adopted by the California Air Resources Board on October 8, 1976)

RULE 213. 2. Definitions

(a) STATIONARY SOURCE means a unit or an aggregation of units of nonvehicular air-contaminant-emitting equipment which is located on one property or on contiguous properties; which is under the same ownership or entitlement to use and operate; and, in the case of an aggregation of units, those units which are related to one another. Units shall be deemed related to one another if the operation of one is dependent upon, or affects the operation of, the other; if their operation involves a common or similar raw material, product, or function; or if they have the same first three digits in their standard industrial classification codes as determined from- the Standard Industrial Classification Manual published in 1972 by the Executive Office of the President, Office of Management and Budget.

In addition, in cases where all or part of a stationary source is a facility used to load cargo onto or unload cargo from cargo carriers, other than motor vehicles, the Air Pollution Control Officer shall consider such carriers to be parts of the stationary source. Accordingly, all emissions from such carriers (excluding motor vehicles) which will result in an adverse impact on air quality in the State of California shall be considered as emissions from such stationary source. Emissions from such carriers shall include those that result from the operation of the carriers' engines; the purging or other method of venting of vapors; and from the loading, unloading, storage, processing, and transfer of cargo.

(b) MODIFICATION means any physical change in, or any change in the method of operation of, a stationary source.

For the purposes of this definition:

(1) Routine maintenance or repair shall not be considered to be physical changes, and

(2) An increase in production rate or operating hours shall not be considered to be a change in the method of operation, provided that these increases are not contrary to any existing permit to operate conditions.

(c) BEST AVAILABLE CONTROL TECHNOLOGY means the maximum degree of emission control for any air contaminant emitting equipment, taking into account technology which is known but not necessarily in use, provided that the Air Pollution Control Officer shall not interpret best available control technology to include a requirement which will result in the closing and elimination of or inability to construct a lawful business which could be operated with the application of the best control technology currently in use.

(d) Severability:
If any portion of this Rule shall be found to be unenforceable, such finding shall have no effect on the enforceability of the remaining portions of the Rule, which shall continue to be in full force and effect.

NEW SOURCE REVIEW RULES
(As adopted by the California Air Resources Board on October 8, 1976)

Rule 213. Standards for Permits to Construct: Air Quality Impact

(a) General:

The Air Pollution Control Officer shall deny a permit to construct for any unit or units of a stationary source that fail to meet the applicable requirements of subsection (b) or (c) of this Rule.

(b) Best Available Control Technology:

(1) New Stationary Sources:

The Air Pollution Control Officer shall deny a permit to construct for any unit or units constituting a new stationary source if such source will emit more than 15 pounds per hour or 150 pounds per day of nitrogen oxides, organic gases, or any contaminant for which there is a state or national ambient air quality standard (except carbon monoxide, for which the limits are 150 pounds per hour and 1500 pounds per day) unless the applicant shows that the new source is constructed using best available control technology.

(2) Modifications to Existing Stationary Sources:

The Air Pollution Control Officer shall deny a permit to construct for any modification of any existing stationary source if such source after modification will emit more than 15 pounds per hour or more than 150 pounds per day of nitrogen oxides, organic gases, or any air contaminant for which there is a state or national ambient air quality standard (except carbon monoxide, for which the limits are 150 pounds per hour and 1500 pounds per day), unless the applicant demonstrates that the modification of the existing stationary source will be constructed using best available control technology, and:

(A) That the modification would not result in a net increase in emissions of any pollutant affected by this Rule; or

(B) That best available control technology is being, or is to be, applied to all existing units of the stationary source; or

(C) That emissions from all of the existing units of the stationary source are controlled by use of technology that is at least as

effective as .:that generally in use on similar stationary sources, and that the cost of installing best available -control technology on existing units is economically prohibitive and substantially exceeds the cost per unit mass of controlling emissions of each pollutant through all other control measures; or

(D) That the stationary source is a small business,, as defined in subsection (1) of Section 1896 of Title 2 of the California Administrative Code; that emissions from all existing units of the stationary source are controlled through application of the best technology that is economically reasonable to apply to that stationary source; and that the cost of employing best available control technology is economically prohibitive.'

(c) Air Quality Impact Analysis:

(1) New Stationary Sources:

The Air Pollution Control Officer shall deny a permit to construct for any unit or units constituting a new stationary source if such source will emit more than 25 pounds per hour or 250 pounds per day of nitrogen oxides, organic gases, or any air contaminant for which there is a state or national ambient air quality standard (except carbon monoxide, for which the limits are 250 pounds per hour and 2500 pounds per day), or which is a precursor of any such air contaminant, unless he determines that the emissions from the new source will not cause a violation of, or will not interfere with the attainment or maintenance of, the state or national ambient air quality standard for that same contaminant (or, in the case of a precursor, for the contaminant to which the precursor contributes).

(2) Modifications to Existing Stationary Sources:

The Air Pollution Control Officer shall deny -a permit to construct for any modification of any existing stationary source if the modification will result in a net increase in emissions from the existing source of more than 25 pounds per hour or 250 pounds per day of nitrogen oxides, organic gases, or any air contaminant for which there is a state or national ambient air quality standard (except carbon monoxide, for which the limits are 250 pounds per hour and 2500 pounds per day), or which is a precursor of any such air contaminant, unless he determines that the emissions from the modified source will not cause a violation of, or will not interfere with the

attainment or maintenance of, the state or national ambient air . quality standard for that same contaminant, (or in the case of a precursor, for that contaminant to which the precursor contributes).

(d) Determination of Emission Increases:

In determining under subsection (b) (2) (A) and subsection (c) (2) whether there has been a net increase in emissions and, if so, the amount of any such increase, the Air Pollution Control Officer shall consider all increases and decreases of emissions caused by modifications to that stationary source pursuant to permits to construct issued during the preceding five years, or since the adoption of this Rule, whichever period is shorter. Emission reductions required to comply with federal, state, or district laws, emission limitations, or rules or- regulations shall not be considered to be decreases in emissions for the purposes of this subsection.

(e) Consideration of Future Emission Reductions:

In making the analysis required in subsection (h) (2), the Air Pollution Control Officer shall take into consideration the air quality impact of any reduction in the emissions of the same air contaminant which results from the elimination or modification of other existing stationary sources under the same ownership and operating within the same air basin. If reductions are to be based on planned elimination or modification of any stationary sources, the Air Pollution Control Officer shall condition the permit to operate to require such elimination or modification within not more than 90 days after the start-up of the new or modified source. Emission reductions required to comply with federal, state, or district laws, emission limitations, or rules or regulations shall not be considered to be decreases in emission for the purposes of this subsection.

(f) Exemptions:

(1) The Air Pollution Control Officer shall exempt from the' provisions of subsection (c) of this Rule, any new stationary source or modification of any existing stationary source which:

(A) Will be in whole or in part a replacement for an existing stationary source at the same location if the resulting emissions of any air contaminant will not be increased. The Air Pollution Control Officer may allow a maximum of 90 days as a start-up period for simultaneous operation of the existing stationary source or

replaced portions thereof, and the new stationary source or replacement; or

(B) Will cause demonstrable air quality benefits within the air basin, provided however, that the written concurrence of the California Air Resources Board and United States Environmental Protection Agency shall be obtained prior to the granting of an exemption hereunder; or

(C) Will be used exclusively for providing essential public services such as schools, hospitals, or police and fire fighting facilities, but specifically excluding sources of electrical power generation other than for emergency standby use at essential public service. facilities; or

(D) Is exclusively a modification to convert from use of gaseous fuels to fuel oil because of demonstrable shortages of gaseous fuels, provided that all units constituting the modification will utilize best available control technology. Modifications for the purpose of this paragraph shall include the addition or modification of facilities for storing, transferring and/or transporting such fuel oil at the stationary sources. A condition shall be placed on the operating permit requiring conversion to gaseous or other equivalent low polluting fuels when they are, or become, available; or

(E) Is air pollution control equipment which, when in operation, will reduce emissions from an existing source; or

(F) Is portable sandblasting equipment used on a temporary basis within the air basin.

(2) The Air Pollution Control Officer may exempt from the provisions of subsection (c) of this Rule, any new stationary source, or modification of an existing stationary source, which has been determined to be:

(A) A new stationary source or modification of an existing stationary source utilizing unique and innovative control technology which will result in a significantly lower emission rate from the stationary source than would have occurred with the use of previously known best available control technology, and which will likely serve as a model for technology, to be applied to similar stationary sources within the State. In order for a stationary source to be exempted under this paragraph, the applicant must obtain the written

concurrence of the California Air Resources Board and the United States Environmental Protection Agency with the Air Pollution Control Officer's determination; or

(B) A new stationary source or modification of an existing stationary source that represents a significant advance in the development of a technology that appears to offer extraordinary environmental or public health benefits or other benefits of overriding importance to the public health or welfare. In order for a stationary source to be exempted under this paragraph, the applicant must obtain the written concurrence of the California Air Resources Board and the United States Environmental Protection Agency with the Air Pollution Control Officer's determination.

(g) Notice Requirements for Proposed Exemptions:

Before granting an exemption under subsection (f) (1) (B), (f) (2) (A) or (f) (2) (B) of this Rule, the Air Pollution Control Officer shall publish a notice by prominent advertisement in at least one newspaper of general circulation in the District and shall notify in writing of his intention: the applicant, the United States Environmental Protection Agency, the California. Air Resources Board and adjoining air pollution control districts. Calculations and technical data used by the Air Pollution Control Officer as the bases for granting exemptions pursuant to subsection (f) (1) B), (f) (2) (A) or (f) (2) (B) shall be made available to the California Air Resources Board and United States Environmental Protection Agency. Before granting an exemption under subsection (f) (1) (B), (f) (2) (A) or (f) (2) (B) of this Rule, the Air Pollution Control Officer shall consider any comments received within 30 days after the date of publication or date of notification of the above agencies, whichever occurs later, and shall have obtained the concurrence of the California Air Resources Board and the United States Environmental Protection Agency.

In addition, the Air Pollution Control Officer shall notify in writing the United States Environmental Protection Agency and the California Air Resources Board of the granting of an exemption under subsection (f) (1) (A), (f) (1) (C) or (f) (1) (D).

(h) Procedures for Evaluation of Applications for Permits to Construct:
Before granting a permit to construct for any unit of a new stationary source or modification subject to the requirements of subsection (c) of this Rule, the Air Pollution Control Officer shall:

(1) Require the applicant to submit information sufficient to describe the nature and amounts-of emissions, location, design, construction, and operation of the source, and to submit any additional information required by the Air Pollution Control Officer to make the analysis required by this Rule.

(2) Analyze the effect of the operation of the new or modified stationary source on air quality in the vicinity of the new source or modified stationary source, within the air basin and within adjoining air basins. Such analysis shall considerable air contaminant emissions and air quality in the vicinity of the new source or modified source, within the air basin and within adjoining air basins at the time the new source or modification is proposed to commence normal operation. Such analysis shall be based on the application of existing state and local rules and regulations.

(3) Upon completion of the evaluation, but before granting a permit to construct:

(A) Publish a notice by prominent advertisement in at least one newspaper of general circulation in the District, stating the preliminary decision to grant the permit to construct and where the public may inspect the information required by this subsection. A copy of the notice shall also be sent to the applicant, the United States Environmental Protection Agency, the California Air Resources Board and adjoining air pollution control districts. The notice shall provide a period of 30 days, beginning on the date of publication, or on the date of notification of that above agencies, whichever occurs later, for the public to submit comments on the application.

(B) Make available for public inspection at the Air Pollution Control District office, except as otherwise limited by law: the information submitted by the applicant, the Air Pollution Control Officer's analysis of the effect of the source on air quality, and the preliminary decision to grant the permit to construct. Such

information shall also be forwarded to the California Air Resources Board for review.

(C) Consider all comments submitted. If within the 30-day notice period the Air Pollution Control Officer receives a written request from either the United States Environmental Protection Agency or California Air Resources Board to defer the Air Pollution Control Officer's decision pending the requesting agency's review of the application, the Air Pollution Control Officer shall honor such request for a period of 60 days from the date of such request.

(i) Additional Applicant Requirements:

Receipt of a permit to construct shall not relieve the stationary source owner or operator of the responsibility to comply with other applicable portions of the District's Rules and Regulations.

(j) Severability:

If any portion of this Rule shall be found to be unenforceable, such finding shall have no effect on the enforceability of the remaining portions of the Rule, which shall continue to be in full force and effect.

(Adopted by the California Air Resources Board on October 8, 1976)

RULE 213.1. STANDARDS FOR PERMITS TO OPERATE

(a) Requirement for Permit to Construct as Condition for Permit to Operate:

The Air Pollution Control Officer shall deny a permit to operate for any stationary source subject to the requirements of Rule 213 unless the applicant has obtained a permit to construct.

(b) Air Quality Impact Analysis for Sources Emitting Larger Quantities of Air Contaminants Than Assumed in the Analysis Performed Pursuant to Rule 213:

The Air Pollution Control Officer shall not grant a permit to operate to any stationary source that he determines emits quantities for air contaminants larger than were assumed in the analysis performed for the permit to construct for the source, unless the Air Pollution Control Officer performs the air quality impact analysis required by Rule 213 and determines that the actual emissions from the source will not cause a violation of, or will not interfere with the attainment or maintenance of, any state or national ambient air quality standard.

(c) Permit Conditions:

The Air Pollution Control Officer shall condition the issuance of a permit to operate, on such terms as are deemed necessary to ensure that the stationary source will be operated in the manner assumed in making the analysis required by Rule 213 or subsection (b) of this Rule, whichever is applicable. Where appropriate, such conditions shall prohibit a new stationary source which is a replacement for an existing stationary source from operating, unless the operation of the existing source is terminated. The Air Pollution Control Officer may allow a maximum of 90 days as a start-up period for simultaneous operation of the existing stationary source or replaced portion thereof, and the new stationary source or replacement portions thereof.

(d) Exemptions:

The Air Pollution Control Officer shall exempt from the provisions of this Rule, any stationary source which:

(1) Has received a permit to construct prior to the adoption of Rule 213.

(2) Is a continuing operation, without modification, of a stationary source that was previously exempt from the permit provisions of these Rules and Regulations and a

permit to operate is required solely because of a change of permit exemptions stated in Rule 219.

(e) Severability:

If any portion of this Rule shall be found to be unenforceable, such finding shall have no effect on the enforceability of the remaining portions of the Rule, which shall continue to be in full force and effect.

[(Adopted: 1/9/76; Amended: 1/5/90; Amended: 8/19/97)]

Rule 217
Provision for Sampling and Testing Facilities

The Air Pollution Control Officer may require the applicant or permittee to provide and maintain such facilities as are necessary for sampling and testing. In the event of such requirements, the Air Pollution Control Officer shall notify the applicant in writing of the required size, number and location of sampling ports; the size and location of the sampling platform; the access to the sampling platform, and the utilities for operating the sampling and testing equipment. The platform and access shall be constructed in accordance with the General Industry Safety Orders of the State of California.

[SIP: Submitted as amended on 8/19/97; Approved 11/9/78, 43 FR 52237, 40 CFR 52.220(c)(39)(iii)(B); Approved 11/9/78, 43 FR 52237, 40 CFR 52.220(c)(31)(vi)(C)]

RULE 218.1
Continuous Emission Monitoring Performance Specifications

(A) General

(1) Purpose

(a) The purpose of this rule is to specify standards, specifications and requirements for new, modified and existing Continuous Emission Monitoring Systems (CEMS).

(2) Applicability

(a) The provisions of this rule shall apply to all sources that require CEMS pursuant to Rule 218 – *Continuous Emission Monitoring*.

(B) Definitions

(1) "Analyzer" - The part of the CEMS that analyzes the appropriate gaseous constituents of the conditioned gaseous sample or measures stack gas volumetric flow and fuel flow rates, as applicable.

(a) Contaminant Analyzer - The part of the CEMS that detects the air contaminant concentrations and represents those concentrations in a signal output.

(b) Diluent Analyzer - The part of the CEMS that detects oxygen (O_2), carbon dioxide (CO_2) or other Diluent Gas concentrations and represents those concentrations in a signal output.

(c) Fuel Flowmeter - The part of the CEMS that detects the parameters of all essential measurement sub-systems (e.g., temperature, pressure, differential pressure, frequency, gas density, gas composition, heating value) and generates signal outputs which are a function of the fuel flow rate and all essential measurement subsystem parameters.

(d) Stack Flowmeter - The part of the CEMS that detects the parameters from all essential measurement sub-systems (e.g., temperature, static and atmospheric pressure, gas density, gas composition, molecular weight, gas moisture content) and generates signal outputs which are a function of the stack gas

volumetric flow rate and all essential measurement sub-system parameters.

(2) "Calibration" - A procedure performed to ensure that the CEMS accurately measures and records the concentration of the specific air contaminant or Diluent Gas, flow rate and other parameters necessary to generate the required data, as evidenced by Calibration Checks and achieved by periodic manual or automatic adjustment.

(3) "Calibration Check" - A procedure performed to determine CEMS response to a given gaseous compound concentration by means of injecting a certified calibration gas mixture into the CEMS as close to the probe tip as practical.

(4) "Calibration Drift" (CD) - Change in the CEMS output or response over a specific period of normal continuous operation when the air contaminant or Diluent Gas concentration at the time of the measurements is the same known upscale value. CD is expressed as the sum of the absolute value of the mean difference and the absolute value of the Confidence Coefficient of a series of tests, to the Full Span Range, expressed as a percentage as follows:

$$CD = \frac{\left|\bar{d}\right| + \left|CC\right|}{FSR} \times 100$$

Where:

FSR	=	Full Span Range
$\left\|CC\right\|$	=	Absolute value of the 95% Confidence Coefficient
$\left\|\bar{d}\right\|$	=	Absolute value of the mean difference. The mean difference, $\bar{d}$, is calculated as:

$$\bar{d} = \frac{1}{n}\sum_{i=1}^{n} d_i$$

Where

$\sum_{i=1}^{n} d_i$	=	Algebraic sum of the individual differences d_i
n	=	Number of data points
d_i	=	The difference between the paired response values of the monitoring system

(5) "Calibration Error" (CE)

(a) Calibration Error (as applicable to Section (D) - Standards for Existing CEMS) - The ratio of the difference between the air contaminant or Diluent Gas concentration indicated by the CEMS and the known concentration of the calibration gas, to the known concentration of the calibration gas. CE is calculated as the ratio of the sum of the absolute values of the mean difference and the 95 percent Confidence Coefficient of a series of tests, to the gas concentration, expressed as a percentage, as follows:

$$CE = \frac{\left|\bar{d}\right| + \left|CC\right|}{C} \times 100$$

Where:

C	=	Calibration gas concentration
$\left\|CC\right\|$	=	Absolute value of the 95% Confidence Coefficient
$\left\|\bar{d}\right\|$	=	Absolute value of the mean difference. The mean difference is calculated as:

$$\bar{d} = \frac{1}{n}\sum_{i=1}^{n} d_i$$

Where:

$\sum_{i=1}^{n} d_i$ = Algebraic sum of the individual differences d_i

n = Number of data points

d_i = The difference between the paired monitoring system response value and the known gas concentration or the equivalent rating of the Reference Method value, both in units of the applicable standard

(b) Calibration Error (as applicable to Section (C) - Standards for New or Modified CEMS) - The ratio of the absolute value of the difference between the air contaminant or Diluent Gas concentration indicated by the CEMS and the known concentration of the calibration gas, to the Full Span Range, expressed as a percentage, as follows:

$$CE = \frac{|C - A|}{FSR} \times 100$$

Where:

C = Calibration gas concentration

A = Actual response or the concentration indicated by the monitoring system

FSR = Full Span Range of the instrument

(6) "CEMS Availability Percentage" - A percentage calculated as the ratio of the total unit operating hours for which the CEMS provided quality-assured data, to the source total unit operating hours during a specified period, excluding periods of Calibration, maintenance, repair, or audit, up to a maximum of 40 hours per month.

(7) "Certified CEMS" - A CEMS installed, tested, operated, maintained, and calibrated according to the applicable requirements of Rules 218 and 218.1; that has met the applicable performance specifications of Rule 218.1 and, has received written approval and conditions thereto applying, from the APCO.

(8) "Certified Gas Mixture" - A gas mixture manufactured, analyzed and certified in accordance with the "EPA Traceability Protocol for Assay and Certification of Gaseous Calibration Standards" - EPA-600/R97/121, September 1997 Revision (EPA Traceability Protocol) or any subsequent version published by EPA. This definition incorporates by reference EPA Protocol.

(9) "Confidence Coefficient" (CC) - The 2.5 percent error Confidence Coefficient for the 95 Percent Confidence Interval of a series of tests. The CC is calculated as follows:

$$CC = t_{0.975} \frac{S_d}{\sqrt{n}}$$

Where:

S_d = Standard deviation

n = Number of data in a series of tests

$t_{0.975}$ = t-value (see Table of t-Values below)

Table of t-Values*

n	$t_{0.975}$	n	$t_{0.975}$	n	$t_{0.975}$
2	12.706	7	2.447	12	2.201
3	4.303	8	2.365	13	2.179
4	3.182	9	2.306	14	2.160
5	2.776	10	2.262	15	2.145
6	2.571	11	2.228	16	2.131

*The t-values in this table are already corrected for *n-1* degrees of freedom. Use *n* equal to the number of data points.

(10) "Continuous Emission Monitoring System" (CEMS) – The total combined equipment and systems required to continuously determine air contaminants and Diluent Gas concentrations and/or mass emission rate of a source effluent (as applicable). The CEMS consists of three (3) major subsystems: Sampling Interface, Analyzer and Data Acquisition System.

(11) "Continuous Monitoring" - A monitoring in which a minimum of one (1) measurement (e.g., concentration, mass emission, flow rate) is taken and recorded each minute.

(12) "Data Acquisition System" (DAS) - The part of the CEMS that processes data generated by the Analyzer and records the results, thus creating a permanent record of the output signal in terms of concentration, flow rate, and any other applicable parameter necessary to generate the required data in units of applicable standard. The DAS consists of all equipment such as a computer required to convert the original recorded values to any values required for reporting.

(13) "Diluent Gas" - A gas present in a calibration gas mixture or in source emissions that is present in quantities significantly larger than the air contaminant.

(14) "Full Span Range" (FSR) - The full range of values or data display output that a monitor component is calibrated to measure.

(15) "Linearity Error" (LE) - The percentage error in linearity expressed in terms of the ratio of the absolute value of the difference between the reference value and the mean CEMS response value, to the reference value. LE is calculated as follows:

$$LE = \frac{\left|R - \overline{C}\right|}{R} \times 100$$

Where:

$\overline{C}$ = Mean of the CEMS response values

R = Certified gas concentration as reference value

(16) "Modification Requiring Recertification" - Any change to the basic equipment, control equipment, contaminant concentration, interfering substances, or CEMS that is deemed by the APCO to have a potential for adversely affecting the ability of the CEMS to provide accurate, precise and timely data representative of the stack emissions for which the CEMS (or SCEMS) is required.

(17) "Ninety-Five Percent Confidence Interval" - The statistical estimation denoting a range of values which is expected to include a true value with a 95 percent probability.

(18) "Operating Day" - Each calendar day that emissions pass through the stack or duct.

(19) "Operational Period" - A minimum period of 168 continuous hours during which the CEMS shall operate, according to the manufacturer's written performance and equipment specifications, without unscheduled maintenance, repair, or adjustment.

(20) "Quality Assurance/Quality Control (QA/QC) Plan" – A written document in which the specific procedures for the operation, Calibration and maintenance of a Certified CEMS are described in detail, including additional quality assurance assessments and the corrective action system. The purpose of this plan is to ensure that the CEMS generates, collects and reports valid data that is precise, accurate, complete, and of a quality that meets the requirements, performance specifications, and standards of Rules 218 and 218.1.

(21) "Reference Method" (RM) - The official test method employed by the District to determine compliance with the rules or permit conditions. A list of Reference Methods is identified in Table 1.

(22) "Relative Accuracy" (RA) - The absolute mean difference between the gas concentration or emission rate determined by the CEMS and the value determined by the RM plus 2.5 percent error of Confidence Coefficient of a series of tests, divided by the mean of the RM tests.

(23) "Relative Accuracy Audit" (RAA) - The RA test expressed in terms of the ratio of the relative difference between the mean Reference Method value and the mean CEMS response value, to the mean value determined by the Reference Method or applicable standard for concentration, flow or mass emission rate. Unless otherwise specified, RAA shall have the same specifications and requirements as the Relative Accuracy Test Audit (RATA), except that the RAA shall require a minimum of three (3) data sets. When a rule requires a correction of the air contaminant concentration to a specific O_2 or CO_2 concentration, the RA requirement shall apply to the corrected concentration value. The RA of a RAA data set is calculated and expressed as a percentage as follows:

$$RA = \frac{\bar{r} - \overline{RM}}{\overline{RM}} \times 100$$

Where:

$\overline{RM}$ = Mean of the values determined by the referenced method or applicable standard

$\bar{r}$ = Mean of the CEMS response values

(24) "Relative Accuracy Test Audit" (RATA) - The RA test expressed in terms of the ratio of the sum of the absolute mean difference between the CEMS-generated data and the value determined by the applicable Reference Method or applicable standard and the absolute Confidence Coefficient, to the mean of the Reference Method or applicable standard value for concentration, flow or mass emission rate. When a rule requires a correction of the air contaminant concentration to a specific O_2 or CO_2 concentration, the RA requirement shall apply to the corrected concentration value. The RA of a RATA data set is calculated and expressed as a percentage as follows:

$$RA = \frac{\left|\overline{d}\right| + \left|\overline{CC}\right|}{\overline{RM}} \times 100$$

Where:

$\left|\overline{d}\right|$ = Absolute value of the mean difference

$\left|\overline{CC}\right|$ = Absolute value of the 95% Confidence Coefficient

$\left|\overline{RM}\right|$ = Average RM value or applicable standard

The arithmetic mean of the difference, d, of a set of data is calculated as follows:

$$\overline{d} = \frac{1}{n}\sum_{i=1}^{n} d_i$$

Where:

$\sum_{i=1}^{n} d_i$ = Algebraic sum of the individual differences d_i

d_i = The difference between the Reference Method value and the CEMS value, both in units of the applicable standard

n = Number of data points

(25) "Response Time" - The time interval from a step change in the air contaminant or gas diluent concentration to the time when 95 percent of

the corresponding final value is reached as displayed on the CEMS data recorder or acquisition system. The Response Time is determined by introducing a Certified Gas Mixture into the CEMS upstream of the Sampling Interface and as close to the probe inlet as practicable.

(26) "Routine Maintenance" - Preventive evaluation and repair (if necessary) of CEMS performed at specified intervals to preclude System Failure. Routine Maintenance may be performed as recommended by the manufacturer or a documented standard operating procedure determined through operating experience and approved by the APCO. Repairs to a malfunctioning system are excluded from this definition.

(27) "Sampling Interface" - That part of the CEMS that performs sample acquisition using one (1) or more of the following operations: extraction, physical/chemical separation, transportation or conditioning of a representative sample from a designated source.

(28) "Semi-Continuous Emission Monitoring System" (SCEMS) - The total combined equipment and systems required to semi-continuously determine air contaminants and Diluent Gas concentrations and/or mass emission rate of a source effluent (as applicable). The SCEMS consists of three (3) major subsystems: Sampling Interface, Analyzer and Data Acquisition System. This class of monitoring includes but is not limited to gas chromatography, integrated sensitized tape analyzer, other sample integration based technologies, and time-shared CEMS.

(29) "South Coast Air Quality Management District" (SCAQMD) - The air quality district created pursuant to Division 26, Part 3, Chapter 5.5 of the California Health & Safety Code (commencing with §40400).

(30) "System Bias" - The difference between the gas concentrations exhibited by the CEMS when a calibration gas is introduced at a location upstream of the Sampling Interface, and as close to the sampling probe inlet as practicable, and when the same calibration gas is introduced directly to the Analyzer.

(31) "System Failure" - Inability of the CEMS to meet the requirements of Rule 218.1.

(32) "Time-Sharing" - A monitoring technique where an Analyzer and possibly the associated sample conditioning system is used on more than one (1) source.

(33) "Zero Check" - A procedure performed to determine the response of the CEMS to a given Zero Gas standard by means of injecting the Zero Gas into the CEMS as close to the probe tip as practical.

(34) "Zero Drift" (ZD) - The change in the monitoring system output/response over a stated period of time of normal continuous operation when the air contaminant or Diluent Gas concentration at the time of the measurements is zero. The values for ZD shall be expressed as the ratio of the sum of the absolute value of the mean of the difference between paired instrument response values and the absolute value of the CC, to the Full Span Range, calculated as a percentage as follows:

$$ZD = \frac{\left|\overline{d}\right| + \left|CC\right|}{S} \times 100$$

Where:

S	=	Full Span Range
$\left\|CC\right\|$	=	Absolute value of the Confidence Coefficient
$\left\|\overline{d}\right\|$	=	Absolute value of the mean difference. The mean difference is calculated as:

$$\left|\overline{d}\right| = \frac{1}{n}\sum_{i=1}^{n} d_i$$

Where:

$\sum_{i=1}^{n} d_i$	=	Algebraic sum of the individual differences d_i
n	=	Number of data pairs
d_i	=	The difference between a pair of instrument response values

(35) "Zero Gas" - A gas containing less than a specified amount of the contaminant or Diluent Gas which, when periodically injected into the CEMS, is used to check CEMS' response to the absence of the air contaminant or Diluent Gas.

(C) Standards for New or Modified CEMS

In order to be a Certified CEMS, a CEMS subject to the provisions of Rule 218, Sections (D)(1), (E)(1)(c), (E)(2)(c) and (E)(2)(d), as applicable, shall meet the operational requirements, performance specifications, and standards as follows:

(1) Pre-Certification Testing Requirements for New or Modified CEMS

Before any certification or Relative Accuracy test is performed, the CEMS shall meet the following standards:

(a) CEMS Location

The CEMS shall be installed at a location that enables measurements of air contaminant and Diluent Gas concentration, and flow rates can be made which are representative of the stack emissions of the source.

(b) Sampling Location

The monitoring system sampling probe tip and the Reference Method sampling port locations shall be determined according to SCAQMD Method 1.1. The monitoring sampling probe shall be located where a sample may be obtained which is representative of the source emissions. Each probe shall not interfere with the other when in use. Other locations may be chosen subject to a written approval of the APCO. If an alternate location is chosen which does not conform with SCAQMD Method 1.1, the absence of flow disturbance shall be demonstrated using the SCAQMD method in the source Test Manual, Chapter X, Section 1.4 – "Alternative Site Selection Method," or 40 CFR, Part 60, Appendix A, Method 1, Section 2.5 – "Alternative Measurement Site Selection Procedure," and, the absence of stratification shall be demonstrated using the SCAQMD method in the source Test Manual, Chapter X, Section 13 – "Determination of Gaseous Constituent Stratification". Alternatives to sampling site selection in the presence of stratification are presented in Rule 218.1 Section (C)(3)(c)(ii).

(c) Full Span Range

(i) The FSR for mass emission rate, air contaminant, diluent and flow analyzers shall be set such that all data points are within 10 to 95 percent of the range.

(ii) For air contaminant monitors, the FSR shall be set between 150 and 200 percent of the concentration limit as specified in the applicable rule or permit condition. The FSR may be set at a value other than that specified, but no lower than 120 percent, provided that the CEMS owner or operator demonstrates to the satisfaction of the APCO that the FSR will not be exceeded. Such demonstrations may include, but are not limited to, historical emissions data, historical process information, and historical operational information. A written approval from the APCO shall be obtained before

the FSR may be modified outside of the 150 to 200 percent of the concentration limit.

(iii) For air contaminant monitors, a multiple-span-range may be required to satisfy the provisions of Sections (c)(i) and (c)(ii) above in situations where the normal concentration of the air contaminant emitted is significantly less than the allowable concentration limit. The CEMS shall have the capability to automatically change from one range to the other as appropriate to the monitor's measured concentration.

(iv) For diluent monitors, the FSR shall be set such that the full range of O_2 and CO_2 concentrations can be measured. The FSR shall be set at 25.0 percent O_2 (maximum) and 1.0 percent CO_2 (minimum) concentrations, or at a value approved by the APCO.

(v) Should any data points fall below ten (10) percent of the FSR, those data points shall be reported according the following, as applicable:

a. For CEMS with certified multiple span ranges, the owner shall report data that falls below 10.0 percent of the higher FSR and above 95 percent of the lower FSR, at the 10.0 percent value of the higher FSR;

b. In the event that any of the data points gathered by the CEMS fall below 10.0 percent of the FSR, the owner or operator may elect to report the contaminant concentrations at the 10.0 percent FSR value; or

c. In the event that any data points gathered fall below 10.0 percent of the lowest vendor guaranteed FSR for that CEMS (defined as the lowest FSR that the vendor guarantees to be capable of meeting all current certification requirements of Rule 218 and Rule 218.1, as applicable) the owner or operator may elect to use the following to measure and report contaminant concentrations:

1. Report data at 10.0 percent FSR value; or
2. Report data at actual measured value, provided that the CEMS meets the Supplemental and Alternative Performance Requirements in Attachment A.

(vi) Should any data points fall above 95 percent of FSR, the value shall be invalid for quantification and the CEMS shall be considered unavailable for the purposes of determining CEMS Availability Percentage. All excursions above 95 percent of FSR and the duration of

these excursions shall be reported in the CEMS summary report as prescribed under Rule 218 Section (G).

(d) Strip Chart Recorder

(i) For CEMS where the strip chart recorder is used as the only means of data recording, the strip chart shall have a minimum width of at least 10 inches, a readability of 0.5 percent of the span, and a minimum of 100 chart divisions.

(ii) For CEMS where the strip chart recorder is used as a backup system or for recording data from only a single parameter, a strip chart of lesser size than specified in Section (d)(i) above, may be proposed in the application.

(iii) For CEMS equipped with multiple-span ranges, the chart recorder shall have the capability to automatically change span, as appropriate.

(e) Data Acquisition System (DAS)

(i) The DAS shall maintain all recorded data in accordance with Rule 218, Section (F).

(ii) For CEMS, DAS shall acquire data from monitored parameters at least once every minute.

(iii) For SCEMS, DAS shall acquire data from monitored parameters at least once every 15 minutes.

(iv) DAS acquisition rate shall be set at a constant rate such that the data points are equally spaced.

(v) All valid data points shall be used to determine compliance with applicable limit(s), and, for certification testing and RATA(s).

(vi) DAS sample acquisition rate during certification and RATA(s) shall be the same as the DAS sample acquisition rate during normal CEMS, or SCEMS, operation.

(f) Operational Period

(i) The Operational Period before any certification tests shall be a minimum of 168 continuous hours.

(2) Certification Requirements and Performance Specifications for New or Modified CEMS

Rule 218 Section (D)(1) provides that a series of certification tests shall be performed to demonstrate the acceptability of CEMS performance. The requirements and specifications in conducting initial certification tests follow:

(a) Calibration Error (CE) Testing

The 24-Hour CE Test shall be performed at the low and high ranges, namely 0 to 20 and 80 to 100 percent of FSR, respectively. CE specifications shall be less than or equal to:

(i) 2.5 percent of the FSR for all Analyzers; and
(ii) 3.0 percent of the FRS of the Analyzer, for flow monitors, when an electronic Calibration Check is applicable.

The 24-hour CE Test shall be performed once each day as close to 24-hour intervals as practicable, with a total of eight (8) consecutive tests performed. The CE specifications shall not be exceeded on any of the tests during the entire testing period.

(b) Analyzer Enclosure

(i) The Analyzer shall be contained in an environmentally controlled enclosure. An alarm and recording device shall be incorporated into the system to alert the operator to make corrective action should the Analyzer exceed the manufacturer's recommended specifications for temperature drift.
(ii) Alternatively, the owner or operator of the CEMS may choose to perform the 2-hour CE Tests in lieu of meeting the Analyzer enclosure requirement in Section (C)(2)(b)(i). The 2-hour CE Test shall be performed once every two (2) hours as close to 2-hour intervals as practicable, with total of thirteen consecutive tests performed. The 2-hour CE Test shall be performed when ambient temperature is expected to vary diurnally at least 30°F. The test shall be performed at the low and high ranges of FSR, namely 0 to 20 and 80 to 100 percent, respectively. The specifications in Sections (C)(2)(a)(i) and (ii) shall apply to 2-hour CE.
(iii) The owner or operator of the CEMS may qualify for an exemption from Section (C)(2)(b)(i) to provide environmental controls for the Analyzer enclosure by demonstrating, to the satisfaction of the APCO, that the CEMS is located:
    a. In a geographic area where seasonal high and low temperatures do not exceed the operational temperature specifications for the Analyzer;
    b. In a geographic area where monthly maximum temperature variation is less than 30°F for all months of the year; and
    c. The CEMS is located in a site that is protected from radiation and convection heating sources.

(c) Relative Accuracy

RATA shall be performed for raw contaminant concentration, and if applicable, for corrected concentration, emission rate, O_2 concentration, CO_2 concentration analyzers, and stack and fuel flow monitors. There shall be a minimum of nine (9) sets of test data generated. If the number of tests exceeds nine (9) sets, data may be discarded if it is identified as an outlier by the technical guidance set forth by the APCO, or for valid reasons (e.g., process upsets, CEMS malfunction, etc.) which must be substantiated with appropriate documentation and subject to approval by the APCO. All data collected shall be submitted to the APCO. The CEMS shall meet the following RA performance specifications:

(i) Less than or equal to 20.0 percent of the mean value of the Reference Method for pollutant concentrations, or the de minimus concentration as follows, whichever is greater:

Pollutant	De minimus Concentration
SO_2	2.0 ppm
Reduced sulfur compounds	4.0 ppm

(ii) Less than or equal to 10.0 percent of the mean value of the Reference Method for diluent concentrations, or the de minimus value of 1.0 percent O_2, whichever is greater.

(iii) Less than or equal to 15.0 percent of the mean value of the Reference Method for flow monitors, or the de minimus value equivalent to a calculated volumetric flow rate based on two (2) feet per second stack gas velocity for cases where the mean stack gas velocity obtained by the Reference Method test is less than 15 feet per second.

(iv) Less than or equal to 20.0 percent of the mean value of the Reference Method for mass emission rates, or the de minimus value equivalent to a calculated mass emission rate based on two (2) feet per second stack gas velocity for cases where the mean stack gas velocity obtained by the Reference Method test is less than 15 feet per second.

The Relative Accuracy requirement may be met if the average of the differences between the CEMS measured data and the Reference Method test data plus the Confidence Coefficient is less than or equal to the Relative Accuracy de minimus value.

(3) Relative Accuracy Test Requirements for New or Modified CEMS

Within fourteen days of, or during all Relative Accuracy tests, the CEMS shall meet the following requirements, except those that may be waived as allowed in Rule 218.1, Section (C)(4)(c):

(a) Response Time

The Response Time for carbon monoxide (CO) CEMS shall not exceed 1.5 minutes except where there is a technical limitation, in which case the Response Time shall be five (5) minutes. The Response Time for all other CEMS and flow monitors, as applicable, shall not exceed five (5) minutes.

(b) Calibration Error

The CE Testing requirements are specified in Section (C)(2)(a).

(c) Concentration Stratification

(i) The owner or operator shall demonstrate the absence of stratification through testing performed according to the method in Chapter X, Section 13 - "Non-Standard Methods and Techniques", of the SCAQMD Source Testing Manual. The number of tests shall be determined as follows:

a. Test(s) shall be conducted at one (1) load level if the owner or operator demonstrates to the satisfaction of the APCO that the equipment operates within a 20 percent load range for at least 80 percent of the time;

b. Test(s) shall be conducted at two (2) different load levels if the owner or operator demonstrates to the satisfaction of the APCO that the equipment operates within a 50 percent load range for at least 80 percent of the time; or,

c. Test(s) shall be conducted at three (3) different load levels if the equipment operates outside of the criteria in Sections (C)(3)(c)(i)[a] and [b].

The absence of stratification is considered verified if the difference between the highest measured concentration (time normalized) and the lowest measured concentration (time normalized) divided by the average measured concentration (time normalized), when expressed as a percentage, is less than or equal to 10 percent. Upon verification of the absence of stratification, the owner or operator may position the CEMS sampling probe at any point within the stack with the exception of those points that are adjacent to the stack wall. The CEMS sampling probe should be located in the stack at least one-third of the stack diameter. The RM for RATA may be conducted at a single point

within the stack that is not adjacent to the stack wall and does not interfere with the sampling and the operation of the facility CEMS.

(ii) Should testing demonstrate the presence of stratification, the owner or operator may elect one (1) of the following alternatives:

a. If the stratification is greater than 10 percent but the difference between the highest measured concentration (time normalized) and the lowest measured concentration (time normalized) is less than or equal to 1.0 ppmv:

1. Then the CEMS sampling probe may be located at any point within the stack except any points that is adjacent to the stack or adjacent to the highest measured concentration (time normalized) and the lowest measured concentration (time normalized); or

2. If it is not possible to avoid using a point adjacent to either the highest measured concentration (time normalized) or the lowest measured concentration (time normalized), then locate the CEMS sampling probe such that the placement minimizes the difference between the concentration at the proposed probe location and the concentration at the point of highest measured concentration (time normalized) or the lowest measured concentration (time normalized).

b. Determine a representative CEMS probe location such that the following criteria are met:

1. All traverse point concentrations are within 10.0 percent of the average of all traverse point concentrations (time normalized), or, the difference is less than or equal to 1.0 ppm, whichever is greater;

2. There exists at least one (1) traverse point concentration (Xr), not located next to the stack or duct wall, that is less than or equal to 10.0 percent each adjacent traverse point concentration of Xr, or the difference is less than or equal to 1.0 ppm, whichever is greater; and

3. The CEMS probe is located at (or as near as practical) Xr with minimum adjacent

traverse point concentration fluctuations as determined in Section (C)(3)(c)(ii)[b][2], above.

c. Determine a representative multiple point sampling configuration as approved by the APCO, following the guidance document by Emission Measurement Technical Information Center, "Evaluation Procedure for Multi-Hole Sample Probes" (EMTIC GD-031).

d. Modify the stack and/or CEMS sampling probe location and retest for the absence of stratification.

(d) Cyclonic Flow

The owner or operator shall perform tests to verify the absence of cyclonic flow for the CEMS and Reference Method sampling probes. The cyclonic flow test shall be required when measuring mass emission rates and shall be performed according to the SCAQMD method in the Source Test Manual, Chapter X: Non-Standard Methods and Techniques following the testing conditions of Section (C)(3)(c)(i)[a], [b] or [c], as applicable.

(e) Interference

The owner or operator shall perform tests to verify the absence of sampling, analytical and flow interference, as applicable.

(f) Linearity Error

LE tests shall be performed at the low, middle and high ranges of concentration, namely 20 to 30, 50 to 60, and 80 to 100 percent. Each calibration gas shall be introduced into the CEMS three (3) times. The same gas shall not be used twice in succession. LE shall be less than or equal to 5.0 percent of the calibration gas concentration.

(g) Multiple-Span-Range

For CEMS that have multiple-span-range, all certification tests shall be performed at the lowest range. Except for RA and interference tests, all other certification tests shall be performed on other ranges.

(4) Operational Requirements and Performance Specifications for New or Modified CEMS

After final approval, the CEMS shall be subsequently operated and maintained according to the following requirements and specifications:

(a) 24-Hour CE

CE Tests shall be performed once each Operating Day as close to 24 hour intervals as practicable at the low (0 to 20 percent) and high (80 to 100 percent) ranges of concentration. CE Test results which are greater than the limits specified in Sections (C)(2)(a)(i) and (ii), but less than or equal to 5.0 percent of the FSR shall be addressed by QA/QC Plan remediation. The CEMS shall be deemed out-of-control during such period when any CE Test result is greater than the specified limits and greater than 5.0 percent of the Full Span Range, until the CE Test meets the specifications. All data generated by the CEMS during an out-of-control period shall be deemed invalid but shall not be deleted or excluded from the records or database.

(b) System Bias Test

A System Bias shall be conducted every 12 months in conjunction with RAA required under Rule 218.1 Section (C)(4)(c). The CEMS System Bias shall not exceed ±5.0 percent of the FSR for contaminant Analyzers. In addition, the owner or operator shall include in the facility QA/QC Plan, criteria for excessive drift (e.g. control limits on cumulative drift) and appropriate diagnostic techniques to identify sources of Analyzer drift and System Bias when control limits are exceeded.

(c) Relative Accuracy Testing

RATA and RAA, as applicable, shall be performed at least once every 12 months. The test shall be completed annually no later than the end of the calendar quarter in which the date of the original certification test was performed. During any RA tests after CEMS certification, the owner or operator may request a waiver from stratification, cyclonic flow, and/or interference requirements in Sections (C)(3)(c), (d) and (e), respectively, by submitting to the APCO, for approval, any applicable documentation or previous test or historical data that meets the stratification, cyclonic flow, and/or interference requirements.

(d) Cylinder Gas Audit (CGA)

A CGA shall be performed every calendar quarter but in no more than three (3) quarters in succession. The CGA shall be conducted according to the provisions of 40 CFR 60, Appendix F. The audit gases shall be according to the certification requirements of Rule 218.1.

(e) The APCO may require recertification of the CEMS if the annual availability percentage is below 95 percent. Annual CEMS Availability Percentage calculations will be based on the year ending on the last day of the calendar quarter in which the CEMS was originally certified.

(f) The owner or operator of a CEMS that requires moisture correction in reporting flow and concentration shall measure and monitor moisture in the stack gas used for emission data calculations in accordance with the written technical guidance document set forth by the APCO. Alternatively, with APCO approval, for equipment whose moisture source is only from fuel combustion, the operator may calculate the moisture content using fuel properties and ambient air humidity data or, for processes that saturate the exhaust gas with moisture, such as a wet scrubber system, the operator may use the saturation temperature for moisture content data.

(D) Standards for Existing CEMS

In order to be a Certified CEMS, a CEMS subject to the provisions of Rule 218 Sections (E)(1) and (E)(2), shall meet the following operational requirements and performance specifications, and the standards of Rule 218.1 Section (E):

(1) Performance Specifications for Existing Gaseous Air Contaminant CEMS

	Parameter	Specifications
(a)	Operational Period	Greater than or equal to 168 hours
(b)	Calibration Error	Less than or equal to 5 percent of the calibration gas value
(c)	Response Time	Less than or equal to 10 minutes
(d)	Zero Drift (2-hour)	Less than or equal to 2 percent of FSR
(e)	Zero Drift (24-hour)	Less than or equal to 2 percent of FSR
(f)	Calibration Drift (2-hour)	Less than or equal to 2 percent of FSR
(g)	Calibration Drift (24-hour)	Less than or equal to 2.5 percent of FSR
(h)	Relative Accuracy	Less than or equal to 20 percent of the mean value of the RM test data, or, less than or equal to 10 percent of the allowed concentration, whichever is greater

(2) Performance Specifications for Existing Diluent Gas CEMS

	Parameter	Specifications
(a)	Operational Period	Greater than or equal to 168 hours
(b)	Calibration Error	Less than or equal to 5 percent of the calibration gas value
(c)	Response Time	Less than or equal to 10 minutes
(d)	Zero Drift (2-hour)	Less than or equal to 0.4 percent CO_2 or O_2
(e)	Zero Drift (24-hour)	Less than or equal to 0.5 percent CO_2 or O_2
(f)	Calibration Drift (2-hour)	Less than or equal to 0.4 percent CO_2 or O_2
(g)	Calibration Drift (24-hour)	Less than or equal to 0.5 percent CO_2 or O_2

(3) Full Span Range for Existing CEMS

The instrument FSR shall be equivalent to approximately 200 percent of the concentration limit as specified in the applicable rule, or at a value approved by the APCO. O_2 and CO_2 instrument full span readings shall be such that the full range of concentrations encountered can be measured.

(4) Cycle of Operation for Existing CEMS

The CEMS shall complete a minimum of one (1) cycle of operation (sampling, analyzing and data recording), for each successive 15 minute period.

(E) Standards, Specifications and Requirements for New, Modified and Existing CEMS:

(1) Calibration Gas

(a) Calibration gas mixtures, as defined in Rule Section 218.1 (B)(8), shall be manufactured, analyzed and certified in accordance with the "EPA Traceability Protocol for Assay and Certification of Gaseous Calibration Standards" - EPA-600/R97/121, September 1997 Revision (EPA Protocol). The certification period and

recertification requirements, as applicable, shall be according to the EPA Protocol.

(b) For gas calibration standards not explicitly covered by the EPA Protocol, the CEMS owner or operator shall submit the gas manufacturer's alternative certification protocol for the specific compound or compounds.

(i) The procedures of the EPA Protocol shall be used for gas calibration standards not explicitly covered therein, except that the gas manufacturer must identify a recertification period and submit data documenting the applicability of this period. The gas manufacturer may submit alternative performance standards for certification and recertification, based on supporting technical data also provided by the manufacturer. This alternative shall be subject to the approval of APCO.

(ii) If there is no existing National Institute of Standards and Technology (NIST) standard for the measured parameter, the gas manufacturer may submit an alternative reference standard and the supporting technical data that define the stability, accuracy, and precision of the alternative reference standard. This alternative shall be subject to the approval of APCO.

(iii) The CEMS owner or operator may submit an alternative protocol to the EPA Protocol, provided that the CEMS owner or operator demonstrates through supporting technical data that the procedures therein are not applicable to the constituent in the calibration gas standard being certified. This alternative shall be subject to the approval of APCO.

(c) Compressed and/or filtered air, such as instrument air, may also be used in lieu of oxygen span gas provided that the CEMS owner or operator demonstrates, to the satisfaction of the APCO, that it is of equivalent quality to the calibration gas standards above. As part of such documentation, the owner or operator shall include in their QA/QC Plan the process or operation in producing such compressed and/or filtered air and periodically checking that compressed air and/or filtered air continues to meet the calibration gas standards.

(2) Zero Gas

Zero Gases used shall meet the following criteria:

(a) For gaseous air contaminant monitors, the Zero Gas shall be certified by the manufacturer to contain no more than 0.1 ppm of the air contaminant analyzed by the subject monitor or 1.0 percent of the applicable standard, whichever is less.

(b) For CO monitors, the Zero Gas shall be certified by the manufacturer to contain less than 0.5 ppm carbon CO or 1.0 percent of the applicable standard, whichever is less.

(c) For CO_2 and O_2 monitors, the Zero Gas shall be certified by the manufacturer to contain less than 1.0 ppm CO_2 or O_2.

(d) Compressed and/or filtered air, such as instrument air, may also be used in lieu of Zero Gas provided that the CEMS owner or operator demonstrates, to the satisfaction of the APCO, that it is of equivalent quality to the above Zero Gas standards. As part of such documentation, the owner or operator shall include in their QA/QC plan the process or operation in producing such compressed and/or filtered air and periodically checking that compressed air and/or filtered air continues to meet the Zero Gas standards.

(3) Automatic Calibration Data

If automatic adjustments to the monitor settings are made, conduct the calibration tests in a way that the magnitude of the adjustments can be determined and recorded.

(4) F-Factors

The owner or operator shall use in the CEMS calculations the Fd factors listed in 40 CFR Part 60, Appendix A, Method 19, Table 19-1, as applicable. When alternative fuels are fired, the owner or operator shall submit data to develop Fd factors and obtain APCO approval.

(5) NO_2 to NO Conversion Efficiency

The conversion efficiency tests shall be conducted according to the requirements of SCAQMD Method 100.1. The value for the NO_2 gas shall be greater than or equal to the maximum expected or recorded NO_2 and greater than or equal to 20 percent of the FSR.

(F) Time-Sharing Requirements

A time-shared CEMS for which an application is submitted after July 17, 2012 shall meet all of the performance specifications as well as the following requirements:

(1) All sources shall have mutually compatible range(s) of air contaminant gases at all times.

(2) Each source shall have a data-reading period, at a minimum, equal to three (3) times the longest Response Time of the system. For shared systems the Response Time is measured at the input or probe at each source. A demonstration of Response Time for each source shall be made during certification testing. Data are not to be collected following a switch of sample sources until a period of time equal to one (1) Response Time has passed.

(3) The CEMS shall be capable of performing and recording zero and span calibrations at each source, including the calibration factors and correction values before and after every automatic Calibration.

Table 1
REFERENCE METHODS
RULE 218.1

SCAQMD Method 1.1	Sample and Velocity Traverses for Stationary Sources
SCAQMD Method 1.2	Sample and Velocity Traverses for Stationary Sources with Small Stack or Ducts
SCAQMD Method 2.1	Determination of Stack Gas Velocity and Volumetric Flow Rate (S-type Pitot tube)
SCAQMD Method 2.2	Direct Measurement of Gas Volume through Pipes and Small Ducts
SCAQMD Method 2.3	Determination of Gas Velocity and Volumetric Flow Rate from Small Stacks or Ducts
SCAQMD Method 3.1	Gas Analysis for Dry Molecular Weight and Excess Air
SCAQMD Method 4.1	Determination of Moisture Content in Stack Gases
SCAQMD Method 6.1	Determination of Sulfuric Acid and Sulfur Oxides from Stationary Sources
SCAQMD Method 7.1	Determination of Nitrogen Oxide Emissions for Stationary Sources
SCAQMD Method 100.1	Instrumental Analyzer Procedures for Continuous Gaseous Emission Sampling
SCAQMD Method 307.91	Determination of Sulfur in a Gaseous Matrix
EPA Method 6	Determination of Sulfur Dioxide Emissions from Stationary Sources
EPA Method 19	Determination of Sulfur Dioxide Removal Efficiency and Particulate, Sulfur Dioxide and Nitrogen Oxides Emission Rates from Electric Utility Steam Generator (40 CFR Part 60, Appendix A)
ASTM Method D 4294-03	Standard Test Method for Sulfur in Petroleum and Petroleum Products by Energy Dispersive X-Ray Fluorescence Spectrometry
ASTM Method D2622 -05	Standard Test Method for Sulfur in Petroleum Products by Wavelength Dispersive X-ray Fluorescence Spectrometry

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ATTACHMENT A

SUPPLEMENTAL AND ALTERNATIVE CEMS PERFORMANCE REQUIREMENTS

(A) Applicability of Supplemental and Alternative Performance Requirements

The CEMS operator who elects (or who may be required) to measure concentrations that fall below 10 percent of the lowest vendor guaranteed full scale span range, shall satisfy the performance requirements as specified in Table A-1 listed below.

TABLE A-1
Alternative Performance Requirement(s)

CEMS Certified per Rule 218.1 Yes or No	**Performance Requirement(s)**			
	LLSR/BFD	**HLSR/BFD**	**LLR/BFD**	**LLCE**
Yes	X		+	X
No	X	X	+	X

(1) + (plus) denotes an additional performance requirement that shall be conducted if the mandatory performance requirement(s) cannot be met.

(2) If the concentration of the CEMS is such that the specifications for the low level spike recovery/bias factor determination cannot be met, the facility permit holder shall conduct a low level RATA/bias factor determination.

(3) Abbreviations used in this attachment are:

Low Level Spike Recovery/Bias Factor Determination (LLSR/BFD)
High Level Spike Recovery/Bias Factor Determination (HLSR/BFD)
Low Level RATA/Bias Factor Determination (LLR/BFD)
Low Level Calibration Error (LLCE)
Relative Accuracy Test Audit (RATA)
Relative Accuracy (RA)
National Institute of Standards Traceability (NIST)

(B) Test Definitions, Performance Specifications and Test Procedures

This section explains in detail how each performance requirement is to be conducted.

(1) Low Level Calibration Error

The low level CE test is defined as challenging the CEMS (from probe to monitor) with certified calibration gases (e.g., NO in N_2) at three (3) levels in the 0-20 percent Full Span Range. Since Certified Gas Mixtures or standards may not be available at the concentrations required for this test, gas dilution systems may be used, with District approval, if they are used according to either District or EPA protocols as specified in Rule 218.1, for the verification of gas dilution systems in the field. The CEMS high-level calibration gas may be diluted for the purpose of conducting the low level CE test.

(a) Performance Specifications

Introduce pollutant concentrations at approximately the 20 percent, 10 percent, and 5 percent of full span levels through the normal CEMS Calibration system. No low level CE shall exceed 2.5 percent of full scale span.

(b) Testing Procedures

(i) Perform a standard zero/span check; if zero or span check exceeds 2.5 percent full span, adjust monitor and redo zero/span check.
(ii) After zero/span check allow the CEMS to sample stack gas for at least 15 minutes.
(iii) Introduce any of the low level CE or standards through the CEMS Calibration system.
(iv) Read the CEMS response to the calibration gas starting no later than three (3) system Response Times after introducing the calibration gas; the CEMS response shall be averaged for at least three (3) Response Times and for no longer than six (6) Response Times.
(v) After the low level CE check allow the CEMS to sample stack gas for at least 15 minutes.
(vi) Repeat steps (iii) through (v) until all three (3) low level CE checks are complete.
(vii) Conduct post test calibration and Zero Checks.

(2) Spike Recovery and Bias Factor Determinations

Spiking is defined as introducing known concentrations of the pollutant of interest (e.g., gas standard to contain a mixture of NO and NO_2 is representative of the ratio of NO and NO_2 in stack gas) and an appropriate non-reactive, noncondensable and non-soluble tracer gas from a single cylinder (EPA Protocol as specified in Rule 218.1 or NIST traceable to two (2) percent analytical accuracy if no EPA Protocol is available) near the probe and upstream of any sample conditioning systems, at a flow rate not to exceed 10 percent of the total sample gas flow rate. The purpose of

the 10 percent limitation is to ensure that the gas matrix (water, CO_2, particulates, interferences) is essentially the same as the stack gas alone. The tracer gas is monitored in real time and the ratio of the monitored concentration to the certified concentration in the cylinder is the dilution factor. The expected pollutant concentration (dilution factor times the certified pollutant concentration in the cylinder) is compared to the monitored pollutant concentration.

(3) High Level Spike Recovery/Bias Factor Determination

The high level spike recovery/bias factor determination is used when it is technologically not possible to certify the CEMS per the standard Rule 218.1 requirements. The spiking facility/interface shall be a permanently installed part of the CEMS sample acquisition system and accessible to the APCO as well as the CEMS operator.

(a) Performance Specifications

The CEMS shall demonstrate a RA $\leq$20 percent, where the spike value is used in place of the Reference Method in the normal RA calculation, as described below.

(b) Testing Procedures

(i) Spike the sample to the CEMS with a calibration standard containing the pollutant of interest and CO or other non-soluble, non-reacting alternative tracer gas (alternative tracer gas) at a flow rate not to exceed 10 percent of the CEMS sampling flow rate and of such concentrations as to produce an expected 40-80 percent of full scale span for the pollutant of interest and a quantifiable concentration of CO (or alternative tracer gas) that is at least a factor of 10 higher than expected in the unspiked stack gas. The calibration standards for both pollutants of interest and CO (or alternative tracer gas) must meet Rule 218.1 requirements.

(ii) Monitor the CO (or alternative tracer gas) using an appropriate continuous (or semi-continuous if necessary) monitor meeting the requirements of SCAQMD Method 100.1 and all data falling within the 10-95 percent full scale span, and preferably within 30-70 percent full scale span.

(iii) Alternate spiked sample gas and unspiked sample gas for a total of nine (9) runs of spiked sample gas and ten runs of unspiked sample gas. Sampling times should be sufficiently long to mitigate Response Time and averaging effects.

(iv) For each run, the average CEMS reading must be between 40 percent full scale span and 80 percent full scale span. If not, adjust spiking as necessary and continue runs, but expected spike must represent at least 50 percent of the total pollutant value read by the CEMS.

(v) Calculate the spike recovery for both the pollutant and the CO (or alternative tracer gas) for each run by first averaging the pre- and post-spike values for each run and subtracting that value from the spiked value to yield nine (9) values for recovered spikes.

(vi) Using the CO (or alternative tracer gas) spike recovery values for each run and the certified CO (or alternative tracer gas) concentration, calculate the dilution ratio for each run. Multiply the certified pollutant concentration by the dilution factor for each run to determine the expected diluted pollutant concentrations. Using the expected diluted concentrations as the "Reference Method" value, calculate the Relative Accuracy. The RA shall be ≤20 percent.

(4) Low Level Spike Recovery/Bias Factor Determination

The low-level spike recovery/bias factor determination is used to determine if a significant bias exists at concentrations near the 10 percent full scale span level. The spiking facility/interface shall be a permanently installed part of the CEMS sample acquisition system and accessible to the APCO staff as well as the CEMS operator.

(a) Performance Specifications

There are no pass/fail criteria with respect to the magnitude of the percent RA. There are performance criteria for the range of concentration on the CEMS the extent to which the spike must be greater than the background pollutant level.

(b) Testing Procedures

(i) Spike the sample to the CEMS with a calibration standard containing the pollutant of interest and CO or other non-soluble, non-reacting alternative tracer gas (alternative tracer gas) at a flow rate not to exceed 10 percent of the CEMS sampling flow rate and of such concentrations as to produce an expected 10-25 percent of full scale span for the pollutant of interest and a quantifiable concentration of CO (or alternative tracer gas) that is at least a factor of 10 higher than expected in the unspiked stack gas. The calibration standards for both pollutants of interest and CO

(or alternative tracer gas) must meet Rule 218.1 requirements.

(ii) Monitor the CO (or alternative tracer gas) using an appropriate continuous (or semi-continuous if necessary) monitor meeting the requirements of SCAQMD Method 100.1 and all data falling within the 10-95 percent full scale span, and preferably within 30-70 percent full scale span.

(iii) Alternate spiked sample gas and unspiked sample gas for a total of nine (9) runs of spiked sample gas and ten runs of unspiked sample gas. Sampling times should be sufficiently long to mitigate Response Time and averaging effects.

(iv) For each run, the average CEMS reading must be below 25 percent full scale span and >10 percent full scale span. If not, adjust spiking as necessary and continue runs; but expected spike must represent at least 50 percent of the total pollutant value read by the CEMS.

(v) Calculate the spike recovery for both the pollutant and the CO (or alternative tracer gas) for each run by first averaging the pre- and post-spike values for each run and subtracting that value from the spiked value to yield nine (9) values for recovered spikes.

(vi) Using the CO (or alternative tracer gas) spike recovery values for each run and the certified CO (or alternative tracer gas) concentration, calculate the dilution ratio for each run. Multiply the certified pollutant concentration by the dilution factor for each run to determine the expected diluted pollutant concentrations. Using the expected diluted concentrations as the "Reference Method" value, calculate the RA as specified in Rule 218.1. If the average difference is less than the CC then no low level bias factor is applied. If the average difference is greater than the CC and the average expected spike is less than the average CEMS measured spike, then no low level bias factor is applied. If the average difference is greater than the CC and the average expected spike is greater than the average CEMS measured spike, then a low level bias factor equal to the absolute value of the average difference is added to data reported at or below the 10 percent of full scale span.

(5) Low Level RATA/Bias Factor Determination using Enhanced Reference Method 6.1

A low level RATA/bias factor determination is designed to determine if there exists a statistically significant bias at low level concentrations. It consists of nine (9) test runs that measure the stack concentration and the CEMS concentration concurrently.

(a) Performance Specifications

There are no pass/fail criteria with respect to the magnitude of the percent Relative Accuracy. There are performance criteria for the special RATA with respect to the Reference Method and range of concentration on the CEMS.

(b) Testing Procedures

The Reference Method for the low level RATA/bias factor determination is SCAQMD Method 100.1

(i) Perform a minimum of nine (9) runs of low level RATA for CEMS versus the Reference Method at actual levels (unspiked).
(ii) The full scale span range for the Reference Method shall be such that all data falls with 20 - 95 percent of full scale span range.
(iii) The Reference Method shall meet all SCAQMD Method 100.1 performance criteria.
(iv) Calculate the average difference (d = CEMS - Reference Method, ppm) and CC (cc = statistical calculated, ppm).
(v) If $d > 0$ then the bias = 0 ppm; if $d < 0$ and $|d| > cc$ then bias = d; if $d < 0$ and $|d| < cc$ then bias = 0 ppm.

(C) Testing Frequency

For each CEMS, perform the aforementioned performance requirements once a year thereafter. These annual assessments shall be completed within six (6) months of the end of the calendar quarter in which the CEMS was originally certified.

See SIP Table at http://www.avaqmd.ca.gov/Modules/ShowDocument.aspx?documentid=921

(**Adopted:** 1/ 9/76; **Amended:** 4/1/77; **Amended:** 8/5/77; **Amended:** 4/6/79; **Amended:** 8/7/81; **Readopted by Statute:** 07/01/97; **Readopted by Statute:** 01/01/02; **Amended:** 5/17/05; **Amended:** 07/17/12)

RULE 218
Continuous Emission Monitoring

(A) General

(1) Purpose

(a) The purpose of this rule is to specify Continuous Emission Monitoring System (CEMS) approvals and standards.

(2) Applicability

(a) The provisions of this rule shall apply to all sources that require CEMS as specified in the regulations or permit conditions, with the following exceptions:

(i) This rule shall not apply to CEMS subject to Regulation IX – *Standards of Performance for New Stationary Sources*, Regulation X – *National Emissions Standards for Hazardous Air Pollutants*, or Rule 3010 – *Acid Rain Provisions of Federal Operating Permits*.

(ii) This rule shall not apply to CEMS subject to permit conditions where the purpose of the CEMS is to monitor the performance of the basic and/or control equipment and not to determine compliance with any applicable limit or standard.

(iii) This rule shall not apply to CEMS where alternative performance specifications are required by another District rule.

(B) Definitions

(1) "Analyzer" – The part of the CEMS that analyzes the appropriate gaseous constituents of the conditioned gaseous sample or measures stack gas volumetric flow and fuel flow rates, as applicable.

(a) Contaminant Analyzer – The part of the CEMS that detects the air contaminant and represents those concentrations in a signal output.

(b) Diluent Analyzer – The part of the CEMS that detects oxygen, carbon dioxide or other Diluent Gas concentrations and represents those concentrations in a signal output.

(c) Fuel Flowmeter – The part of the CEMS that detects the parameters of all essential measurement subsystems (e.g., temperature, pressure, differential

pressure, frequency, gas density, gas composition, heating value) and generates signal outputs which are a function of the fuel flow rate and all essential measurement subsystem parameters.

(d) Stack Flowmeter – The part of the CEMS that detects the parameters from all essential measurement subsystems (e.g., temperature, static and atmospheric pressure, gas density, gas composition, molecular weight, gas moisture content) and generates signal outputs which are a function of the stack gas volumetric flow rate and all essential measurement subsystem parameters.

(2) "Calibration" – A procedure performed to ensure that the CEMS accurately measures and records air contaminant or Diluent Gas concentration, flow rate and other parameters necessary to generate data, as evidenced by Calibration Checks, and achieved by periodic manual or automatic adjustment.

(3) "Calibration Check" – A procedure performed to determine the CEMS response to a given gaseous compound concentration. A certified calibration gas mixture is injected into the CEMS as close to the probe tip as practical.

(4) "Certified CEMS" – A CEMS installed, tested, operated, maintained, and calibrated according to the applicable requirements of Rule 218, and that has met the applicable performance specifications according to Rule 218 Section (D)(1)(b), and, has received written approval and conditions thereto applying, from the APCO.

(5) "Certified Gas Mixture" – A gas mixture manufactured, analyzed and certified according to "EPA Traceability Protocol for Assay and Certification of Gaseous Calibration Standards" – EPA-600/R97/121, September 1997 Revision (EPA Protocol) or any subsequent version published by EPA. This definition incorporates by reference EPA Protocol

(6) "Continuous Emissions Monitoring System" (CEMS) – The total combined equipment and systems required to continuously determine air contaminants and Diluent Gas concentrations and/or mass emission rate of a source effluent (as applicable). The CEMS consists of three major subsystems: Sampling Interface, Analyzer, and Data Acquisition System.

(7) "Continuous Monitoring" – Monitoring in which a minimum of one (1) measurement (e.g., concentration, mass emission, flow rate) is taken and recorded each minute.

(8) "Data Acquisition System" (DAS) – The part of the CEMS that processes data generated by the Analyzer and records the results, thus creating a permanent record of the output signal in terms of concentration, flow rate, and/or any other applicable parameter necessary to generate the required data in units of applicable standard. The DAS consists of all equipment, such as a computer, required to convert the original recorded values to any values required for reporting.

(9) "Diluent Gas" – A gas present in a calibration gas mixture or in the source emissions which is present in quantities significantly larger than the air contaminant.

(10) "Laboratory Approval Program" (LAP) – A program administered by the South Coast Air Quality Management District (SCAQMD) that grants test-method-specific approvals to independent testing laboratories or firms that perform tests to determine source compliance with SCAQMD rules and regulations.

(11) "Modification Requiring Recertification" – Any change to the basic equipment, control equipment, contaminant concentration, interfering substances, or CEMS (or SCEMS) that is deemed by the APCO to have a potential for adversely affecting the ability of the CEMS to provide accurate, precise and timely data representative of the stack emissions for which the CEMS (or SCEMS) is required.

(12) "Quality Assurance/Quality Control (QA/QC) Plan" – A written document in which the specific procedures for the operation, Calibration, and maintenance of a Certified CEMS are described in detail, including additional quality assurance assessments and the corrective action system. The purpose of this plan is to ensure that the CEMS generates, collects, and reports valid data that is precise, accurate, complete, and of a quality that meets the requirements, performance specifications, and standards of Rules 218 and 218.1.

(13) "Routine Maintenance" – Preventive evaluation and repair (if necessary) of CEMS performed at specified intervals to preclude System Failure. Routine Maintenance may be performed as recommended by the manufacturer or a documented standard operating procedure determined through operating experience and approved by the APCO. Repairs to a malfunctioning system are excluded from this definition.

(14) "Sampling Interface" – That part of the CEMS that performs sample acquisition using one or more of the following operations: extraction, physical/chemical separation, transportation or conditioning of a representative sample from a designated source.

(15) "Semi-Continuous Emission Monitoring" – A monitoring technique in which a minimum of one (1) measurement (e.g., concentration, mass emission, flow rate) is taken and recorded every 15 minutes.

(16) "Semi-Continuous Emission Monitoring System" (SCEMS) – The total combined equipment and systems to semi-continuously determine air contaminant and Diluent Gas concentrations and/or the mass emission rate in a source effluent (as applicable). The system consists of three (3) major subsystems: Sampling Interface, Analyzer and DAS. This class of monitoring includes, but is not limited to, gas chromatography, integrated sensitized tape analyzer, other sample integration based technologies, and Time-Shared CEMS.

(17) "South Coast Air Quality Management District" (SCAQMD) – The air quality district created pursuant to Division 26, Part 3, Chapter 5.5 of the California Health & Safety Code (commencing with §40400).

(18) "System Failure" – Inability of the CEMS to meet the requirements of Rule 218.1 – *Continuing Emission Monitoring Performance Specifications*, or, Code of Federal Regulations, Title 40 – "Protection of Environment," Part 60 – "Standards of Performance for New Stationary Sources," Appendix F – Quality Assurance Procedures."

(19) "Time-Sharing" – A monitoring technique where an Analyzer, and possibly the associated sampling conditioning system, is used on more than one source.

(20) "Working Day" – Monday through Friday, excluding holidays.

(21) "Zero Check" – A procedure performed to determine the response of the CEMS to a given Zero Gas standard by means of injecting the Zero Gas into the CEMS as close to the probe tip as practical.

(22) "Zero Gas" – A gas containing less than a specified amount of the air contaminant or Diluent Gas which, when periodically injected into the CEMS, is used to check CEMS response to the absence of the air contaminant or Diluent Gas.

(C) Monitoring Requirements for New, Modified and Existing CEMS

(1) The owner or operator of any equipment subject to this rule shall provide, properly install, operate and maintain in Calibration and good working order a Certified CEMS to measure the concentration and/or emission rates, as applicable, of air contaminants and Diluent Gases, flow rates, and other required parameters. The owner or operator shall also provide the necessary records and other data necessary to calculate air contaminant emission rates or concentrations, as specified in Rule 218 Sections (F) and (G).

(D) Requirements for New and Modified CEMS and SCEMS

(1) Application and Approval Requirements for New and Modified CEMS

(a) The owner or operator of any equipment subject to this rule shall submit to the APCO an "Application for CEMS" or "Application for CEMS Modification", as applicable. Any application submitted on or after July 17, 2012, shall require an initial approval by the APCO prior to installation of a new CEMS or modification of an existing CEMS. The APCO shall notify the applicant in writing within 60 calendar days of receipt of an application for a new CEMS, or within 30 calendar days of receipt of an application for a modification to an existing CEMS, if the application contains sufficient information to be deemed complete. Where an application has been determined to be incomplete, the APCO shall

request specific information needed to complete the application. Upon receipt of any complete resubmittal or the additional information, plans or specifications after the application has been deemed incomplete, a new 30-day period shall begin during which the APCO shall determine the completeness of the application and notify the applicant. Within 90 days of installation, a person operating or using CEMS shall undertake a series of certification tests. If the equipment served by the CEMS is not operating at the time of complete CEMS installation, then the CEMS shall undergo a series of certification tests within 90 days from the next start-up of the equipment served by the CEMS. The purpose of the certification tests is to demonstrate the CEMS performance pursuant to the specifications in accordance with the provisions of Rule 218, Section (D)(1)(b). The owner or operator shall notify the APCO in writing at least 14 days before the scheduled certification test dates. The certification tests shall be performed by a testing laboratory approved under the SCAQMD LAP. Data from such tests shall be submitted to the APCO within 45 days following test completion. If satisfactory performance is demonstrated, final approval of the CEMS shall be granted. Subsequent operation and maintenance of the Certified CEMS shall be in accordance with the provisions of Rule 218, Section (D)(1)(b). After final approval, modifications made to the CEMS shall be reviewed and approved by the APCO according to the specifications stipulated in Rule 218, Section (D)(1)(b), and may require all or a portion of performance tests to be conducted.

(b) Upon submission of an "Application for CEMS" or "Application for CEMS Modification" as prescribed in Rule 218, Section (D)(1)(a), the applicant shall indicate either one of the following conditions:

(i) That the CEMS shall be reviewed and certified according to the provisions of Rule 218.1 - *Continuous Emission Monitoring Performance Specifications*, Section (C), and the subsequent operation and maintenance of the Certified CEMS shall be in accordance with the provisions of Rule 218, Sections (C), (F), (G) and (H) and of the requirements of Rule 218.1, Sections (C) and (E); or

(ii) That the CEMS shall be reviewed and certified according to the applicable provisions of the Code of Federal Regulations, Title 40 – "Protection of Environment", Part 60 – "Standards of Performance for New Stationary Sources" (40 CFR 60), Appendix B – "Performance Specifications" (Appendix B), and the subsequent operation and maintenance of the Certified CEMS shall be in accordance with the provisions of Rule 218, Sections (C), (F), (G) and (H), and the requirements of 40 CFR 60, Appendix F – "Quality Assurance Procedures" (Appendix F). Notwithstanding the requirements of this Section, any alternative test methods for 40 CFR 60, Appendices B and F shall be those that are listed in Rule 218.1, Table 1 - Reference Methods.

(c) A "Notification of Pre-Approved Modification" and report of results of prescribed quality assurance checks may be submitted in lieu of the "Application for CEMS Modification" when the modification has been made in accordance with the written technical guidance document approved by the APCO.

(2) Application and Approval Requirements for New and Modified SCEMS

(a) In lieu of submitting an application for CEMS per Rule 218, Section (D)(1), the owner or operator of any equipment subject to this rule, may elect to submit an application for a SCEMS if the averaging time for the applicable limit(s) for which the CEMS is required is 24 hours or greater; or, if the owner or operator demonstrates, to the satisfaction of the APCO, that no CEMS technology is commercially available for the applicable contaminant and the applicable limit(s).

(b) If the conditions in Rule 218, Section (D)(2)(a), above, do not apply, the owner or operator of any equipment subject to this rule may still elect to submit an application for a SCEMS in lieu of a CEMS, subject to the following:

(i) The owner or operator demonstrates that the concentrations and/or emissions required to be monitored would be equivalent to that monitored by a CEMS for the applicable averaging period, to the satisfaction of the APCO;
(ii) The SCEMS shall be capable to take and record a minimum of one (1) measurement (concentration, mass emission rate and/or flow rate, as applicable) every 15 minutes allowing as equally spaced data points as practical;
(iii) The owner or operator shall include in the QA/QC Plan the method of calculating the 15-minute averages for compliance determination to the applicable limit or standard;
(iv) If an exceedance of the allowable limit or standard is calculated using fewer than 100 percent valid data points, then the District shall use any relevant data for the operation of the equipment (basic and control, as applicable) to verify the calculated exceedance; and
(v) If a Time-Shared SCEMS is proposed, it shall meet the performance specifications of Rule 218.1, Section (F).

(c) The requirements for the application submittal and approval of CEMS as provided in Rule 218, Section (D)(1) shall also apply for SCEMS applications.

(3) Operation of CEMS or SCEMS During Certification Testing

CEMS or SCEMS shall be certified as configured for the normal operation of the CEMS or SCEMS with respect to sample acquisition, sample conditioning, pollutant/diluent detection, data requirements and reporting.

(4) QA/QC Plan for New or Modified CEMS or SCEMS

(a) The owner or operator of CEMS or SCEMS who elects the performance specifications according to Rule 218, Section (D)(1)(b)(i), shall submit to the APCO for approval a CEMS QA/QC Plan within 45 days of CEMS installation and no later than 30 days before the certification tests.

(b) Alternative Quality Assurance Practices

The owner or operator of CEMS or SCEMS who elects the performance specifications according to Rule 218, Section (D)(1)(b)(i), may choose to develop alternative CEMS operational test requirements to be included in the CEMS QA/QC procedures that assure data of equivalent or better quality. These alternative QA/QC procedures shall be submitted with the facility QA/QC Plan and are subject to the approval of the APCO.

(E) Requirements for Existing CEMS and SCEMS

(1) Requirements for Existing CEMS

(a) A CEMS installed and granted final approval before July 17, 2012 shall be maintained and operated according to the provisions of Rule 218, Sections (C), (F), (G) and (H), and the requirements of Rule 218.1, Sections (D) and (E).

(b) A CEMS application for initial and final approval submitted to the APCO before July 17, 2012 shall be reviewed and approved by the APCO according to the specifications and requirements of Rule 218.1, Sections (D) and (E). After final approval, the CEMS shall be operated and maintained according to the provisions of Rule 218, Sections (C), (F), (G) and (H), and the requirements of Rule 218.1, Sections (D) and (E).

(c) Modifications Requiring Recertification to any existing CEMS shall be reviewed and approved according to the conditions under Rule 218 Section (D)(1)(b)(i) or (ii), as applicable. After final approval, the modified CEMS shall be operated and maintained according to the conditions under Rule 218, Section (D)(1)(b)(i) or (ii), as applicable.

(d) The owner or operator of existing CEMS shall develop and implement a written QA/QC Plan no later than July 17, 2013. The written QA/QC Plan shall be kept on record and available for inspection upon request by the APCO.

(2) Requirements for Existing SCEMS

(a) A SCEMS installed and granted final approval before July 17, 2012 shall be maintained and operated according to the provisions of Rule 218,

Sections (C), (F), (G) and (H), and the requirements of Rule 218.1, Sections (D) and (E).

(b) A SCEMS application for initial and final approval submitted to the APCO before July 17, 2012 shall be reviewed and approved by the APCO according to the specifications and requirements of Rule 218.1, Sections (D) and (E). After final approval, the SCEMS shall be operated and maintained according to the provisions of Rule 218, Sections (C), (F), (G) and (H), and the requirements of Rule 218.1, Sections (D) and (E).

(c) Modifications Requiring Recertification to any existing SCEMS shall be reviewed and approved according to the conditions under Rule 218 Section (D)(1)(b)(i) or (ii), as applicable. After final approval, the modified CEMS shall be operated and maintained according to the conditions under Rule 218, Section (D)(1)(b)(i) or (ii), as applicable.

(d) The owner or operator of an existing SCEMS operating on or before July 17, 2012 shall be required to comply with the provisions of Rule 218.1 Section (F) – "Time-Sharing Requirements" and with the provisions of Rule 218.1 Sections (C) and (E), or, 40 CFR 60 Appendices B and F, as applicable, when the equipment served by the Time-Shared SCEMS is modified such that:

(i) One or more of the sources monitored requires a new monitoring range;
(ii) The operating permit is modified to require Continuous Monitoring; or,
(iii) An applicable source specific rule is adopted or revised to require Continuous Monitoring.

Subsequent operation and maintenance of the SCEMS shall be according to the provisions of Rule 218, Section (D)(1)(b)(i) or (ii), as applicable.

(F) Retention of Records for New, Modified and Existing CEMS and SCEMS

(1) The records of the data obtained from the CEMS recording devices shall clearly indicate concentrations or emission rates, or both, as specified by the APCO. Records shall be maintained by the CEMS owner or operator for a minimum period of five (5) years, unless otherwise specifically provided by another District regulation or permit conditions, and shall be made available to the APCO upon request.

(2) All calculations, raw parameter data used for calculations, records of the occurrence and duration of any start up, shutdown or malfunction, performance test, evaluation, Calibration, adjustment and maintenance of the CEMS as well as calibration gas traceability shall be retained by the CEMS operator for a minimum period of five (5) years unless otherwise specifically provided by another District

regulation or permit conditions, and shall be made available to the APCO upon request.

(G) Reporting Requirements for New, Modified and Existing CEMS and SCEMS

Unless otherwise specifically provided by another District regulation or permit conditions, the following reporting requirements shall apply to new, modified and existing CEMS and SCEMS:

(1) A CEMS owner or operator shall provide a summary of the concentration and/or emission rate data, as applicable, obtained from the CEMS, as well as any additional information specified by the APCO, to evaluate the accuracy and precision of the measurements. The summary shall be submitted once every six (6) months to the APCO, except when more frequent reporting is specifically required by another District rule, or the APCO, on a case-by-case basis, determines that more frequent reporting is necessary to accurately assess the compliance status of the source. The summary report shall be submitted within 30 days following the end of the six (6) month period being reported, in the form and manner prescribed by the APCO. The summary shall be maintained on-site in a retrievable and readable form and shall be made available to the APCO upon request. The submitted summaries shall be available for public inspection at the District.

(2) The CEMS owner or operator shall report any concentration level and/or emission rate, as applicable, in excess of the regulated limit within 24 hours or the next Working Day after such occurrence in the form and manner prescribed by the APCO. The report shall include the following information:

(a) Time intervals, date, and magnitude of the excess concentration level, nature and cause of the excess concentration (if known), corrective action(s) taken, preventive measure(s) adopted, specific location of CEMS, the equipment or CEMS involved and the facility contact person.

(b) The averaging period used for data reporting shall correspond to the averaging period specified in the rule or permit condition governing the concentration and/or emission rate, if applicable.

(3) Reports of CEMS Failure or Shutdown

(a) The CEMS owner or operator shall notify the APCO within 24 hours or the next Working Day, in the event of a system failure or shutdown, which exceeds 24 hours. Zero and Calibration Checks and Routine Maintenance do not require reporting.

(b) In the case of a CEMS failure or shutdown, compliance with the provisions of Rule 218, Section (C) is waived for a period not to exceed 96 consecutive hours. Such waiver is extended beyond 96 consecutive hours

only if a petition for an interim variance is filed in accordance with Regulation V – *Procedures Before the Hearing Board* and shall terminate at the time the Hearing Board acts upon such variance petition. CEMS owners or operators of qualified facilities may obtain a Hearing Board approval of an alternative operating condition following the established procedure in Rule 518.2 – *Federal Alternative Operating Conditions*.

(c) Regularly scheduled CEMS maintenance shall be deferred until the report required under Rule 218, Section (G)(2) is made, if the system is measuring a concentration equal to or exceeding the emission standard, and if such deferral is not reasonably expected to result in damage to the system.

(d) Continuous emission monitoring requirements shall not apply during regular Calibration Checks of the system, or Routine Maintenance and repair lasting 60 minutes or less.

(H) Posting of Written Approval for New, Modified and Existing CMS and SCEMS

The CEMS owner or operator of an approved CEMS shall affix a written notice of approval or a legible facsimile thereof upon the equipment or within 26 feet of the equipment as prescribed in Rule 206 – *Posting Of Permit To Operate*, in a manner such that it is clearly visible, legible, and safely accessible. In the event that the equipment is so constructed or operated that the notice of approval or its legible facsimile cannot be so placed, such notice or legible facsimile shall be mounted on a location approved by the APCO.

See SIP Table at http://www.avaqmd.ca.gov/Modules/ShowDocument.aspx?documentid=921

(**Adopted:** 11/4/77; **Amended:** 8/7/81; **Readopted by Statute:** 07/01/97; **Readopted by Statute:** 01/01/02; **Amended:** 5/17/05)

RULE 220
Exemption-Net Increase In Emissions

(A) Upon petition of the owner or operator of a source, and after notice and hearing in accordance with the procedures provided in Health and Safety Code §§40826 and 40807, the Air Pollution Control Officer (APCO) may exempt a source from any prohibitory rule of Regulations IV and XI if he makes a finding that installation of controls and/or process changes required to achieve compliance with the subject prohibitory rule will result in a net adverse impact on air quality.

(B) In granting an exemption hereunder, the APCO shall require the person seeking the exemption to install, as a condition to its permit to operate, alternative controls and/or process changes which will result in the greatest practical net emission reduction.

(C) In making the finding set forth above, the APCO shall consider secondary emissions including but not limited to, incremental electrical power generation emissions.

(D) Provisions of this rule shall not apply to those sources with primary emissions of one pound per hour or more of the air contaminant which the rule from which the exemption is sought is designed to control.

(E) The APCO may revoke the exemption if he determines after a hearing that conditions have changed such that there is no longer a net air quality benefit.

(F) The hearing shall be conducted by the APCO. The APCO shall report each determination to grant or deny an exemption hereunder to the District Board at its next regular meeting following the grant or denial of such exemption. Any person who has been denied an exemption hereunder or whose exemption has been revoked, may petition the District Hearing Board to rehear the matter. Such petition shall contain a verified statement of facts setting forth the basis for petitioner's claim that the APCO improperly denied or revoked the exemption. The District Hearing Board, after considering the petition, may grant or deny a hearing. If it denies a hearing, it shall state the basis for its denial.

[SIP: Approved 7/6/82, 47 FR 29231, 40 CFR 52.220(c)(103)(xviii)(A)]

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(**Adopted** 1/4/85; **Readopted by Statute:** 07/01/97; **Readopted by Statute:** 01/01/02; **Amended:** 5/17/05)

RULE 221
Plans

(A) A person shall not conduct any operation for which these rules and regulations require a plan without first obtaining approval of such plan by the Air Pollution Control Officer (APCO) within the time interval expressed in said rules and regulations.

(B) The operation shall not be conducted contrary to any conditions specified in the approved plan.

(C) All plans shall be submitted in a form and manner as specified by the APCO.

(D) A violation of the plan is a violation of the rule.

(E) A plan shall have all the rights delineated in Regulation II for permits including the right of appeal.

[SIP: Approved 4/17/87, 52 FR 12522, 40 CFR 52.220(c)(165)(i)(B)(1)]

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(**Adopted:** 03/17/98; **Amended:** 07/21/98
Amended: 5/17/05)

RULE 226
Limitations on Potential to Emit

(A) General

(1) Purpose

(a) The purpose of this Rule is to create federally enforceable limitations on potential to emit for all facilities, as defined in District Rule 3001(M), which meet the applicability criteria set forth below and otherwise comply with the provisions of this Rule.

(2) Applicability

(a) This Rule shall apply to any Facility, as defined in District Rule 3001(M), which would, if it did not comply with the limitations set forth in this Rule, have the potential to emit air contaminants equal to or in excess of the threshold for a Major Facility and which meets one of the following conditions:

(i) In every twelve (12) month period, the actual emissions of the Facility are less than or equal to the emissions limitations set forth in section (C); or

(ii) In every twelve (12) month period, at least ninety percent (90%) of the emissions from the Facility are associated with an operation limited by any one of the alternate operational limits as set forth in section (E).

(b) This Rule shall not apply to any of the following:

(i) Any Facility whose actual emissions, throughput, or operation, at any time after the effective date of this Rule is greater than the emissions limitations set forth in section (C) or alternative operational limits set forth in section (E) and which meets the following conditions:

a. The owner or operator of the Facility has notified the District at least thirty (30) days prior to any exceedance that an application for a Federal Operating Permit (FOP) pursuant to Regulation XXX will be submitted, or a federally enforceable voluntary emissions limitation pursuant to District Rule 225 will be obtained; and

b. A complete application for a FOP is received by the District, or the voluntary emissions limitation is approved and included on the permit for the Facility, within twelve (12) months of the date of the notification.

(ii) Any Facility that has applied for a FOP in conformance with Regulation XXX in a timely manner and is awaiting final action by the District and/or USEPA.

(iii) Any Facility required to obtain a FOP for any reason other than it qualifies as a Major Facility.

(iv) Any Facility with a valid FOP.

(v) Any Facility with a valid District permit which contains federally enforceable voluntary emissions limitations issued pursuant to District Rule 225 which limit the potential to emit of the Facility to levels below the applicable threshold for a Major Facility.

(c) A Facility described in subsection (A)(2)(b)(i) above, may be immediately subject to all applicable federal requirements.

(d) Notwithstanding subsections (A)(2)(b)(ii) and (A)(2)(b)(iv) above, nothing in this section shall prevent any Facility, which has had a FOP, from qualifying to comply with this Rule in the future in lieu of maintaining an application for a FOP or upon recession of a FOP if the owner or operator demonstrates that the Facility is in compliance with the emissions limitations set forth in section (C) or alternative operational limits set forth in section (E).

(e) For the purposes of determining applicability of this Rule, the owner or operator of a Facility may take into account the operational limitations of air pollution control equipment when determining potential to emit as long as such air pollution control equipment is required by Federal, State or District law, Rule, permit or Regulation.

(i) The owner or operator of the Facility shall maintain and operate such air pollution control equipment in a manner consistent with good air pollution control practices for minimizing emissions.

(f) The provisions of subsection (A)(2)(e) above shall not apply after January 1, 1999 unless:

(i) The operational limitation requiring the air pollution control device is federally enforceable; or

(ii) The Governing Board of the District specifically extends this provision and such extension is submitted to USEPA.

(g) Any extension of the provisions of subsection (A)(2)(e) pursuant to subsection (A)(2)(f) above shall remain valid unless and until USEPA disapproves such extension.

(B) Definitions

For the purposes of this Rule the definitions contained in District Rule 3001 shall apply unless a term is otherwise defined herein.

(1) "Actual Emissions" - The emissions of a regulated air pollutant from a Facility for every twelve (12) month period. Actual Emissions shall be determined as follows:

(a) By the use of valid continuous emissions monitoring data or source tests data.

(b) In the absence of data as specified in subsection (B)(1)(a) above, by calculation of emissions from any one or more of the following: throughputs of process material; throughputs of material stored; usage of materials; data provided in manufacturer's product specifications; volatile organic compound content reports or laboratory analyses for the material; any other information required by this Rule or by any other Federal, State or District Regulations; and/or information requested in writing by the District.

(c) All calculations of actual emissions shall use USEPA, CARB or District approved methods, including but not limited to emissions factors and other assumptions.

(2) "Air Pollutant" - Any air pollution agent or combination of such agents, including any physical, chemical, biological, or radioactive (including source material, special nuclear material and byproduct material) substance or matter which is emitted into or otherwise enters the ambient air

(3) "Alternative Operational Limit" - A limit on a measurable parameter such as hours of operation, throughput of materials, use of materials, or quantity of product as specified in section (E).

(4) "California Air Resources Board" (CARB) - The Air Resources Board of the State of California as established pursuant to the provisions of Part 2 of Division 26 (commencing with section 39500) of the California Health and Safety Code.

(5) "Contiguous Property" - Two or more parcels of land with a common boundary or separated solely by a public or private roadway, or other public or private right-of-way.

(6) "District" - The Antelope Valley Air Quality Management District the geographical area of which is described in District Rule 103.

(7) "Emission Unit" - Any article, machine, equipment, operation, contrivance or related groupings of such that may produce and/or emit any regulated air pollutant or hazardous air pollutant.

(8) "Facility" - Any permit unit, group of permit units, non-permitted equipment, or any combination thereof which emits or may emit an Air Pollutant; and belongs to a single major industrial group in the Standard Industrial Classification Manual; and is located on a single parcel of land or on contiguous property within the District; and which is owned or operated by the same person or by persons under common control.

(9) "Federal Clean Air Act" - The Federal Clean Air Act (codified at 42 U.S.C. ''7401-7671q) as well as any amendments thereto and any implementing regulations promulgated thereunder.

(10) "Federal Operating Permit" (FOP) - An operating permit issued pursuant to District Regulation XXX after the effective date of such regulation as set forth in District Rule 3000(D).

(11) "Federally Enforceable" - Any requirement, condition or other term which is fully enforceable by USEPA pursuant to the provisions of 42 U.S.C. '7413 (Federal Clean Air Act '113) or the public pursuant to the provisions of 42 U.S.C. '7604 (Federal Clean Air Act '304).

(12) "Hazardous Air Pollutant" (HAP) - Any air pollutant listed pursuant to 42 U.S.C. '7412(b) (Federal Clean Air Act '112) or in regulations promulgated thereunder.

(13) "Major Facility" - Any Facility which emits or has the potential to emit the following amounts and types of Air Pollutants:

(a) 100 tons per year or more of any Air Pollutants other than those indicated in subparts (b) and (c) below.

(b) 25 tons per year or more of the following Air Pollutants:

(i) NO_x (nitrogen oxides)
(ii) VOC (volatile organic compounds)

(c) 10 tons per year or more of any HAP or 25 tons per year or more of any combination of HAPs or such lesser quantity as the USEPA may establish by Rule.

(14) "Potential to Emit" - The maximum capacity of a Facility to emit any air pollutant under its physical and operational design.

(a) Any physical or operational limitation on the capacity of the unit to emit a pollutant including air pollution control equipment; restrictions on hours of operation; or restrictions on the type and/or amount of material combusted, stored or processed shall be treated as part of the design if such limitation is Federally Enforceable.

(b) Fugitive Emissions of HAPs shall be included in the calculation of a Facility's Potential to Emit.

(c) Fugitive Emissions of other Air Pollutants shall not be included in the calculations of a Facility's Potential to Emit unless the Facility belongs to a category listed in 40 CFR 70.2 "Major Source"(2).

(d) Emissions of HAPs from any oil or gas exploration well (with its associated equipment) and emissions from any pipeline compressor or pump stations shall not be aggregated with emissions from other similar units, whether or not such units are in a contiguous area.

(15) "Process Statement" - An annual report on permitted emission units from an owner or operator of a Facility certified pursuant to District Rule 3008 and containing the following information as applicable: throughputs of process materials; throughputs of materials stored; usage of materials; fuel usage; any available continuous emissions monitoring data; hours of operation; any other information required by this Rule; and/or any other information requested by the District in writing.

(16) "Regulated Air Pollutant" - Any of the following Air Pollutants:

(a) Any pollutant, and its precursors, for which a national ambient air quality standard has been promulgated.

(b) Any pollutant that is subject to a standard under 42 U.S.C. '7411 (Federal Clean Air Act '111) or any regulation promulgated pursuant to that section.

(c) Any substance which has been designated a Class I or Class II substance under 42 U.S.C. '7671a (Federal Clean Air Act '602) or any regulation promulgated pursuant to that section.

(d) Any pollutant subject to a standard or other requirement established pursuant to 42 U.S.C. '7412 (Federal Clean Air Act '112).

(17) "Twelve (12) Month Period" - A period of twelve consecutive months determined on a rolling basis with a new twelve month period beginning on the first day of each calendar month.

(18) "United States Environmental Protection Agency" (USEPA) - Refers to the Administrator or the appropriate designee of the United States Environmental Protection Agency.

(C) Emissions Limitations

(1) Unless the owner or operator of a Facility has chosen to operate the Facility under an alternative operational limit as specified in section (E), no Facility subject to this Rule shall emit in every twelve (12) month period more than the following quantities of emissions:

(a) Fifty percent (50%) of the thresholds for regulated air pollutants (excluding all HAPs) as set forth in District Rule 3001(s);

(b) For HAPs:

(i) Five (5) tons per year of a single HAP; or
(ii) Twelve and a half (12.5) tons per year of any combination of HAPs; or
(iii) Fifty percent (50%) of any lesser threshold for a single HAP as the USEPA may promulgate by regulation.

(2) The District shall evaluate the compliance by a Facility with the emissions limitations stated in subsection (C)(1) above as a part of the District's annual permit renewal process required by Health & Safety Code ' 42301(e).

(a) In performing this evaluation the District shall consider any annual process statement submitted pursuant to this Rule.

(b) In the absence of valid continuous emission monitoring data or source test data, actual emissions shall be calculated using emissions factors approved by USEPA, CARB or the District.

(3) Unless the owner or operator has chosen to operate the Facility under an alternative operational limit as specified in section (E), the owner or operator of a Facility subject to this Rule shall obtain any necessary permits or permit modification prior to commencing any physical or operational change or activity which will result in actual emissions that exceed the limits specified in subsection (C)(1) above.

(D) Record Keeping and Reporting Requirements

(1) General Record Keeping:

(a) Immediately upon adoption of this Rule, the owner or operator of a Facility subject to this Rule shall comply with the applicable record keeping requirements contained in subsections (D)(1-6) below unless:

(i) The owner or operator has chosen to operate the Facility under an alternative operational limit as specified in section (E); or
(ii) Such Facility is exempt from record keeping requirements pursuant to section (F)(1).

(b) An owner or operator who has chosen to operate the Facility under an alternative operational limit as specified in section (E) shall, instead, comply with the applicable record keeping requirements contained in that section.

(c) A Facility which was previously exempt pursuant to section (F)(1) shall comply with the appropriate record keeping requirements if such Facility exceeds the limits contained in subsection (F)(1).

(d) The record keeping requirements contained in this Rule shall not replace any record keeping requirement contained in a permit to operate or in any applicable Federal, State or District Rule or Regulation.

(e) The owner or operator of a Facility subject to this Rule shall maintain records required pursuant to this section for each permitted emission unit or groups of permitted emission units sufficient to determine actual emissions.

(i) Such records shall be summarized in a monthly log; and
(ii) Such records shall be maintained on site for a period of at least five (5) years and shall be made available to the District, CARB or USEPA staff upon request.

(2) Record Keeping for Coating and/or Solvent Emission Unit(s):

(a) The owner or operator of a Facility subject to this Rule which contains a permitted coating and/or solvent emissions unit or which uses a coating, solvent, ink or adhesive shall keep and maintain the following records:

(i) A current list of all coatings, solvents, inks and adhesives used at the Facility. This list shall contain the following information: Manufacturer, brand, product name or code; VOC content in grams per liter or pounds per gallon; and HAP content in grams per liter or pounds per

gallon.

(a) In the alternative to the above information the list may contain manufacturer's product specifications, material VOC content reports and/or laboratory reports which provide the information required above.

(ii) A description of any equipment used during and after coating or solvent application including the following: type, make and model of equipment; maximum design process rate or throughput; control device(s) type and description (if any); a description of any coating or solvent application and/or drying method(s) employed.

(iii) A monthly log of the consumption of each solvent, coating, ink and adhesive used, including but not limited to solvents used in clean-up and surface preparation.

(iv) All purchase orders, invoices, and other documents to support information contained in the monthly log.

(3) Record Keeping for Organic Liquid Storage Unit(s):

(a) The owner or operator of a Facility subject to this Rule which contains a permitted organic liquid storage unit shall keep and maintain the following records:

(i) A monthly log identifying the liquid stored and the monthly throughput.

(ii) Information on the tank design and specifications including any related control equipment

(4) Record Keeping for Combustion Emission Unit(s):

(a) The owner or operator of a Facility subject to this Rule which contains a permitted combustion emission unit shall keep and maintain the following records:

(i) Information regarding the following: equipment type, make and model; maximum design process rate or maximum power input/output; minimum operating temperature (for thermal oxidizers only); equipment capacity; type and description of control device(s), if any; all source test information for the equipment.

(ii) A monthly log containing the following: hours of operation; fuel type, usage and fuel heating value; percentage of sulfur contained in fuel oil and coal used; percentage of nitrogen contained in coal used.

a. The appropriate BTU content of the fuel shall be included in the log and stated in terms of BTU/lb or BTU/gal.

(5) Record Keeping for Emission Control Unit(s):

(a) The owner or operator of a Facility subject to this Rule that contains a permitted emission control unit shall keep and maintain the following records:

(i) Information regarding the equipment type, description, make and model of the control unit.
(ii) Information regarding the emission units served by the control unit.
(iii) Information regarding equipment design, including but not limited to: Pollutants controlled and /control effectiveness; maximum design or rated capacity; inlet and outlet temperatures; concentrations for each pollutant controlled; catalyst data including type, material, life, volume, space velocity, ammonia injection rate and temperature; baghouse data including design, cleaning method, fabric material, flow rate, and air/cloth ratio; electrostatic precipitator data including number of fields, cleaning method, and power input; scrubber data including type, design, sorbent type, and pressure drop; any other appropriate design data; and all source test information.
(iv) A monthly log of hours of operation including notation of any control equipment breakdowns, upsets, repairs, maintenance and any other deviations from design parameters.

(6) Record Keeping for General Emission Unit(s);

(a) The owner or operator of a Facility subject to this Rule that contains an emission unit not listed in subsection (D)(2-5) above, shall keep and maintain the following records:

(i) Information on the process and equipment including the following: equipment type, description, make and model; maximum design process rate or throughput; control device(s) type and description, if any.
(ii) Any additional information requested in writing by the District.
(iii) A monthly log of operating hours including: each raw material used and its amount; each product produced and its production rate.
(iv) Purchase orders, invoices, and other documents to support information in the monthly log.

(7) General Reporting Requirements:

(a) The owner or operator of a Facility subject to this Rule shall comply with the applicable reporting requirements contained in this subsection unless:

(i) Such Facility is exempt from reporting requirements pursuant to section (F)(2).

(b) At the time of annual renewal of a permit to operate pursuant to Regulation II, each owner or operator of a Facility subject to this Rule shall submit to the District a process statement.

(i) Such process statement shall be signed by the owner or operator of a Facility and shall certify that the information provided in the process statement is accurate and true.

(c) A Facility which was previously exempt pursuant to section (F)(2) shall comply with the applicable reporting requirements if such Facility exceeds the limits contained in subsection (F)(2).

(d) The District may, in writing, request the submission of additional information. The owner or operator of a Facility subject to this Rule shall submit such requested information within thirty (30) days of the date of the request.

(E) Alternative Operational Limits

(1) General Provisions for Alternative Operational Limits:

(a) The owner or operator of a Facility subject to this Rule may choose to operate under any one alternative operational limit, provided that at least ninety percent (90%) of the Facility's emissions in every twelve (12) month period are associated with the operation(s) limited by the applicable alternative operational limit.

(b) Any owner or operator of a Facility choosing to operate under any one alternative operational limit shall operate the Facility in compliance with the terms and conditions contained in the applicable alternative operating limit and comply with the specified record keeping and reporting requirements pursuant to subsection (D).

(c) Any owner or operator of a Facility choosing to operate under any one alternative operational limit shall:

(i) Report within twenty-four (24) hours to the District any exceedance of the alternative operational limit; and

(ii) Maintain all purchase order, invoices and other documentation required to support the information contained in any monthly log specified in an alternative operational limit; and

(iii) Maintain all records and other documentation required to be kept pursuant to an alternative operational limit on site for a period of at least five (5) years and to have such documentation available to the District, CARB or USEPA staff upon request.

(d) Any owner or operator of a Facility choosing to operate under any one alternative operational limit shall obtain any necessary permit prior to commencing any physical or operational change or activity which will result in an exceedance of an applicable operational limit.

(2) Alternative Operational Limit for Gasoline Dispensing Facilities with Phase I and Phase II Vapor Recovery Systems:

(a) The owner or operator shall operate the gasoline dispensing Facility in compliance with the following:

(i) No more than 7,000,000 gallons of gasoline shall be dispensed in every twelve (12) month period.

(ii) A monthly log of gallons of gasoline dispensed in the preceding month and a monthly calculation of the total gallons dispensed in the previous twelve (12) month period shall be kept on site.

(iii) A copy of the monthly log required by subsection (E)(2)(a)(ii), above, shall be submitted to the District at the time of annual permit renewal of a permit to operate pursuant to Regulation II.

a. The owner or operator shall certify the log in compliance with the provisions of District Rule 3008.

(3) Alternative Operational Limit for Degreasing or Solvent Using Unit(s):

(a) The owner or operator shall operate the degreasing or solvent-using unit(s) in compliance with the following:

(i) If the solvents used <u>do not include</u> methyl chloroform (1,1,1-trichloroethane), methylene chloride (dichloromethane), tetrachloroethylene (perchloroethylene) or trichloroethylene:

a. No more than 5,400 gallons of any combination of solvent containing materials shall be used in every twelve (12) month period; and

b. No more than 2,200 gallons of any one solvent containing material shall be used in every twelve (12) month period.

(ii) If the solvents used <u>include</u> methyl chloroform (1,1,1-trichloroethane), methylene chloride (dichloromethane), tetrachloroethylene (perchloroethylene) or trichloroethylene:

a. No more than 2,900 gallons of any combination of solvent

containing materials shall be used in every twelve (12) month period; and

b. No more than 1,200 gallons of any one solvent containing material shall be used in every twelve (12) month period.

(iii) A monthly log of amount and type of solvent used in the preceding month with a monthly calculation of the total gallons used in the previous twelve (12) month period shall be kept on site.

(iv) A copy of the monthly log required by subsection (E)(3)(a)(iii) above shall be submitted to the District at the time of annual permit renewal of a permit to operate pursuant to Regulation II.

a. The owner or operator shall certify the log in compliance with the provisions of District Rule 3008.

(4) Alternative Operational Limit for Paint Spraying Unit(s):

(a) The owner or operator shall operate the paint spraying unit(s) in compliance with the following:

(i) The total usage rate of all VOC containing materials, including but not limited to coatings, thinner, reducers, and cleanup solution shall not exceed 2,388 gallons in every twelve (12) month period.

a. The VOC content of the material used at a paint spray unit shall not exceed 6.7 lbs. solvent per gallon coating, as applied, less water and exempt compounds. Nothing in this section shall be construed to exempt an owner or operator from compliance with the applicable VOC content limitation for specific coatings as contained in applicable District Rules of Regulations IV and XI.

(ii) A monthly log of the gallons of VOC containing materials used in the preceding month with a monthly calculation of the total gallons used in the previous twelve (12) month period shall be kept on site.

(iii) A copy of the monthly log shall be submitted to the District at the time of annual permit renewal of a permit to operate pursuant to Regulation II.

a. The owner or operator shall certify the log in compliance with the provisions of District Rule 3008.

(5) Alternative Operational Limit for Diesel-Fueled Emergency Standby Engine(s) with Output Less Than 1,000 Brake Horsepower:

(a) The owner or operator shall operate the emergency standby engine(s) in compliance with the following:

(i) The emergency standby engine(s) shall not operate more than 1,300 hours in every twelve (12) month period and shall not use more than 66,000 gallons of diesel fuel in every twelve (12) month period.

(ii) A monthly log of hours of operation, gallons of fuel used, and a monthly calculation of the total hours operated and gallons of fuel used in the previous twelve (12) month period shall be kept on site.

(iii) A copy of the monthly log required by section (E)(5)(a)(ii) above shall be submitted to the District at the time of annual permit renewal of a permit to operate pursuant to Regulation II.

a. The owner or operator shall certify the log in compliance with the provisions of District Rule 3008.

(F) Exemptions from Record Keeping and Reporting Requirements

(1) Facilities with De Minimis Emissions:

(a) The record keeping and reporting requirements found in sections (C), (D)(1-6) and (E) shall not apply to a Facility which meets either of the following:

(i) The Facility emits less than or equal to the following quantities of emissions in every twelve (12) month period:

a. Five (5) tons per year of a regulated air pollutant excluding HAPs.

b. For HAPs:

1. Two (2) tons per year of a single HAP; or
2. Five (5) tons per year of any combination of HAPs; or
3. Twenty percent (20%) of any lesser threshold for a single HAP that the USEPA may promulgate by regulation.

(ii) At least ninety percent (90%) of the Facility's emissions are associated with an operation for which the throughput is less than or equal to one of the following quantities for every twelve (12) month period:

a. 1,400 gallons of any combination of solvent containing materials but no more than 550 gallons of any one solvent containing material, provided that the materials do not contain methyl chloroform (1,1,1-trichloroethane), methylene chloride (dichloromethane), tetrachloroethylene (perchloroethylene), or trichlorethylene.

b. 750 gallons of any combination of solvent containing materials where the materials contain methyl chloroform (1,1,1-trichloroethane), methylene chloride (dichloromethane), tetrachloroethylene (perchloroethylene), or trichlorethylene.

c. 597 gallons of volatile organic compound containing material used at a paint spray unit(s).

1. The VOC content of the material used at a paint spray unit shall not exceed 6.7 lbs. solvent per gallon coating, as applied, less water and exempt compounds. Nothing in this section shall be construed to exempt an owner or operator from compliace with the applicable VOC content limitation for specific coatings as contained in applicable District Rules of Regulations IV and XI.

d. 4,400,000 gallons of gasoline dispensed from equipment with Phase I and Phase II vapor recovery systems.

e. 470,000 gallons of gasoline dispensed from equipment without Phase I and Phase II vapor recovery systems.

f. 1,400 gallons of gasoline combusted.

g. 16,600 gallons of diesel fuel combusted.

h. 500,000 gallons of distillate oil combusted.

i. 71,400,000 cubic feet of natural gas combusted.

(c) The owner or operator of any Facility which is exempt from record keeping pursuant to this subsection, shall within thirty (30) days of a written request by the District or USEPA demonstrate that the emissions or throughput rates are not in excess of the applicable quantities as set forth in this subsection.

(2) Small Facilities with Greater than De Minimis Emissions:

(a) The reporting requirements found in subsection (D)(7) shall not apply to a Facility which meets the following:

(i) The Facility emits less than or equal to the following quantities of emissions in every twelve (12) month period:

a. For any regulated air pollutant excluding HAPs:

1. Twenty five (25) tons per year of a regulated air pollutant for which the District has a Federal area designation of attainment, unclassified, transitional or moderate nonattainment.

2. Fifteen (15) tons per year of a regulated air pollutant for which the District has a Federal area designation of serious nonattainment.

3. Six and twenty five hundredths (6.25) tons per year of a regulated air pollutant for which the District has a Federal area designation of severe nonattainment.

b. For HAPs:

1. Two and fifty hundredths (2.50) tons per year of a single HAP; or

2. Six and fifty hundredths (6.50) tons per year of any

combination of HAPs; or

3. Twenty percent (25%) of any lesser threshold for a single HAP that the USEPA may promulgate by regulation.

(G) Public Notice

(1) Within three years of the effective date of Regulation XXX, the District shall maintain and make available to the public, upon request the following:

(a) A list of all facilities to which this Rule is applicable; and

(b) Which provision(s) of this Rule each Facility is complying with.

(H) Enforcement and Violations

(1) Interaction with other District Rules:

(a) This Rule shall not relieve any Facility from complying with requirements pertaining to any otherwise applicable preconstruction permit, or replace any condition or term contained in any preconstruction permit, or any provision of a preconstruction permitting program.

(b) Nothing in this Rule shall preclude the issuance of any permit which contains conditions or terms necessary to ensure compliance with this or any other District Rule.

(2) A Facility which is subject to this Rule shall be subject to the applicable federal requirements for a major Facility, including Regulation XXX, on the first day following every twelve (12) month period when either of the of the following occur:

(a) The Facility exceeds a limit specified in sections (C) or (E); or

(b) The owner or operator of the Facility can not demonstrate that the Facility is in compliance with a limit specified in sections (C) or (E).

(3) Failure to comply with any applicable provision of this Rule shall constitute a violation of the Rule. Each day during which a violation of this Rule occurs shall constitute a separate violation.

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(**Adopted**: 02/07/76; **Amended**: 11/06/92; **Amended**: 07/09/93; **Amended**: 02/14/97: **Amended**: 04/20/10)

RULE 403
Fugitive Dust

(A) General

(1) Purpose

(a) The purpose of this rule is to reduce the amount of Particulate Matter entrained in the ambient air as a result of anthropogenic (man-made) Fugitive Dust sources by requiring actions to prevent, reduce or mitigate Fugitive Dust emissions.

(2) Applicability

(a) The provisions of this rule shall apply to any activity or man-made condition capable of generating Fugitive Dust.

(B) Definitions

(1) "Active Operations" – Any activity capable of generating Fugitive Dust, including, but not limited to, Earth-Moving Activities, Construction/Demolition Activities, or heavy- and light-duty vehicular movement.

(2) "Agricultural Operation" – The growing and harvesting of crops or the raising of fowl or animals for the primary purpose of making a profit, providing a livelihood, or conducting agricultural research or instruction by an educational institution. Agricultural Operations do not include activities involving the processing or distribution of crops or fowl.

(3) "Air Pollution Control Officer (APCO)" – The person appointed to the position of Air Pollution Control Officer pursuant to the provisions of Health and Safety Code §40750 and his or her designee.

(4) "Anemometers" – Devices used to measure wind speed and direction.

(5) "Bulk Material" – Sand, gravel, soil, aggregate material less than two inches in length or diameter, and other organic or inorganic Particulate Matter.

(6) "Chemical Stabilizers" – Any non-toxic chemical Dust Suppressant which must not be used if prohibited for use by the Regional Water Quality Control Boards, the California Air Resources Board, the United States Environmental Protection Agency, or any applicable law, rule or regulation; and should meet any specifications, criteria, or tests required by any federal, state, or local water agency. Unless otherwise indicated, the use of a non-toxic Chemical Stabilizer shall be of sufficient concentration and application frequency to maintain a Stabilized Surface.

(7) "Construction/Demolition Activities" – Any on-site mechanical activities preparatory to or related to the building, alteration, rehabilitation, demolition or improvement of property, including, but not limited to the following activities; grading, excavation, loading, crushing, cutting, planing, shaping or ground breaking.

(8) "Contractor" – Any person who has a contractual arrangement to conduct an active operation for another person.

(9) "Disturbed Surface Area" – A portion of the earth's surface which has been physically moved, uncovered, destabilized, or otherwise modified from its undisturbed natural soil condition, thereby increasing the potential for emission of Fugitive Dust. This definition excludes those areas which have:

(a) Been restored to a natural state, such that the vegetative ground cover and soil characteristics are similar to adjacent or nearby natural conditions;

(b) Been paved or otherwise covered by a permanent structure; or

(c) Sustained a vegetative ground cover over at least 70 percent of an area for a period of at least six months.

(10) "Dust Control Plan (DCP)" – A District-approved document that describes what measures will be taken at a location to comply with this rule, prepared in accordance with section (D).

(11) "Dust Suppressants" – Water, hygroscopic materials, or non-toxic Chemical Stabilizers used as a treatment material to reduce Fugitive Dust emissions.

(12) "Earth-Moving Activities" – The use of any equipment for any activity where soil is being moved or uncovered, and shall include, but not be limited to the following: grading, earth cutting and filling operations, loading or unloading of dirt or Bulk Materials, adding to or removing from Open Storage Piles of Bulk Materials, landfill operations, weed abatement through disking, and soil mulching.

(13) "Fugitive Dust" – Any solid Particulate Matter that becomes airborne, other than that emitted from an exhaust stack, directly or indirectly as a result of the activities of man.

(14) "High Wind Conditions" – Instantaneous wind speeds (gusts) which exceed 25 miles per hour.

(15) "Inactive Disturbed Surface Area" – Any Disturbed Surface Area upon which Active Operations have not occurred or are not expected to occur for a period of 20 consecutive days.

(16) "Non-Routine" – Any non-periodic active operation which occurs no more than three times per year, lasts less than 30 cumulative days per year, and is scheduled less than 30 days in advance.

(17) "Open Storage Pile" – Any accumulation of Bulk Material with five percent or greater Silt content which is not fully enclosed, covered or chemically stabilized, and which attains a height of three feet or more and a total surface area of 150 or more square feet. Silt content level is assumed to be five percent or greater unless a person can show, by sampling and analysis in accordance with ASTM Method C-136 or other equivalent method approved in writing by the APCO and the California Air Resources Board, that the Silt content is less than five percent. The results of ASTM Method C-136 or equivalent method are valid for 60 days from the date the sample was taken.

(18) "Particulate Matter" – Any material, except uncombined water, which exists in a finely divided form as a liquid or solid at standard conditions.

(19) "Paved Road" – An improved street, highway, alley, public way, or easement that is covered by typical roadway materials excluding access roadways that connect a facility with a public Paved Road and are not open to through traffic. Public Paved Roads are those open to public access and that are owned by any federal, state, county, municipal or any other governmental or quasi-governmental agencies. Private Paved Roads are any Paved Roads not defined as public.

(20) "PM_{10}" – Particulate Matter with an aerodynamic diameter smaller than or equal to ten microns as measured by the applicable state and federal reference test methods.

(21) "Property Line" – The boundaries of an area in which either a person causing the emission or a person allowing the emission has the legal use or possession of the property. Where such property is divided into one or more sub-tenancies, the Property Line(s) shall refer to the boundaries dividing the areas of all sub-tenancies.

(22) "Silt" – Any aggregate material with a particle size less than 74 micrometers in diameter which passes through a No. 200 sieve.

(23) "Simultaneous Sampling" – The operation of two PM_{10} samplers in such a manner that one sampler is started within five minutes of the other, and each sampler is operated for a consecutive period which must be not less than 290 minutes and not more than 310 minutes.

(24) "Stabilized Surface" – Any previously Disturbed Surface Area or Open Storage Pile which, through the application of Dust Suppressants, shows visual or other evidence of surface crusting and is resistant to Wind-Driven Fugitive Dust and is demonstrated to be stabilized and where Visible Dust Emissions are limited to 20 percent opacity. Chemical treatment must be performed with a substance not disapproved for such use by the applicable Regional Water Quality Control Board.

(25) "Track-out" – Any Bulk Material that adheres to and agglomerates on the exterior surface of motor vehicles, haul trucks, and equipment (including tires) that have been released onto a paved road and can be removed by a vacuum sweeper or a broom sweeper under normal operating conditions.

(26) "Unpaved Roads" – Any unsealed or earthen roads, equipment paths, or travel ways that are not covered by one of the following: concrete, asphaltic concrete, recycled asphalt, or asphalt.

(27) "United States Environmental Protection Agency (USEPA)" – Refers to the Administrator or the appropriate designee of the United States Environmental Protection Agency.

(28) "Visible Dust Emissions (VDE)" – Any dust emissions that are visible to an observer.

(29) "Wind-Driven Fugitive Dust" – Visible emissions from any Disturbed Surface Area which is generated by wind action alone.

(30) "Wind Gust" – The maximum instantaneous wind speed as measured by an Anemometer.

(C) Requirements

(1) A person shall not cause or allow the emissions of Fugitive Dust from:

(a) Any Active Operation, Open Storage Pile, or Disturbed Surface Area such that the presence of such dust remains visible in the atmosphere beyond the Property Line of the emission source; or

(b) Any applicable source such that the dust causes 20 percent opacity or greater during each observation and the total duration of such observations (not necessarily consecutive) is a cumulative three minutes or more in any one hour. Only opacity readings from a single source shall be included in the cumulative total used to determine compliance.

(2) A person shall not cause or allow PM_{10} levels to exceed 50 micrograms per cubic meter when determined, by Simultaneous Sampling, as the difference between upwind and downwind samples collected on high-volume Particulate Matter samplers or other USEPA-approved equivalent method for PM_{10} monitoring. If sampling is conducted, samplers shall be:

(a) Operated, maintained, and calibrated in accordance with 40 Code of Federal Regulations (CFR), Part 50, Appendix J, or appropriate USEPA-published documents for USEPA-approved equivalent method(s) for PM_{10}.

(b) Reasonably placed upwind and downwind of key activity areas and as close to the Property Line as feasible, such that other sources of Fugitive Dust between the sampler and the Property Line are minimized.

(3) Track-out Operations

(a) A person shall not allow Track-out to extend 25 feet or more in cumulative length from the point of origin from an active operation.

Notwithstanding the preceding, all Track-out from an active operation shall be removed at the conclusion of each workday or evening shift.

(b) A person shall not conduct an Active Operation with a Disturbed Surface Area of five or more acres, or with a daily import or export of 100 cubic yards or more of Bulk Material without utilizing at least one of the measures listed in subparagraphs (C)(3)(b)(i) through (C)(3)(b)(v) at each vehicle egress from the site to a paved public road.

(i) Install a pad consisting of washed gravel (minimum-size: one inch) maintained in a clean condition to a depth of at least six inches and extending at least 30 feet wide and at least 50 feet long;

(ii) Pave or apply chemical stabilization at sufficient concentration and frequency to maintain a Stabilized Surface starting from the point of intersection with the public paved surface, and extending at least 100 feet and at least 20 feet wide;

(iii) Utilize a wheel shaker/wheel spreading device consisting of raised dividers (rails, pipe, or grates) at least 24 feet long and ten feet wide to remove Bulk Material from tires and vehicle undercarriages before vehicles exit the site;

(iv) Install and utilize a wheel washing system to remove Bulk Material from tires and vehicle undercarriages before vehicles exit the site; or

(v) Any other control measure approved by the APCO and the USEPA as equivalent to the methods specified in subparagraphs (C)(3)(b)(i) through (C)(3)(b)(iv).

(4) Earth-Moving Operations

(a) A person shall not conduct an Active Operation of Construction, excavation, extraction and other Earth-Moving Activities with a Disturbed Surface Area of five or more acres, or with a daily import or export of 100 cubic yards or more of Bulk Material without utilizing at least one of the measures listed for each of the operation stages specified in subparagraphs (C)(4)(a)(i) through (C)(4)(a)(iv).

(i) Pre-activity:

a. Pre-water site sufficient to limit VDE to 20 percent opacity; and

b. Phase work to reduce the amount of Disturbed Surface Area at any one time

(ii) During Active Operations:

a. Apply water or chemical/organic stabilizers/suppressants sufficient to limit VDE to 20 percent opacity;
b. Construct and maintain wind barriers sufficient to limit VDE to 20 percent opacity. If utilizing wind barriers, control measure (a) above shall also be implemented; or
c. Apply water or chemical/organic stabilizers/suppressants to unpaved haul/access roads and unpaved vehicle/equipment traffic areas sufficient to limit VDE to 20 percent opacity and meet the requirements of section (C)(9).

(iii) Temporary Stabilization During Periods of Inactivity:

a. Restrict vehicular access to the area; and
b. Apply water or chemical/organic stabilizers/suppressants, sufficient to limit VDE to 20 percent opacity, or to comply with the conditions of a Stabilized Surface. If an area having one-half acres or more of Disturbed Surface Area remains unused for seven or more days, the area must comply with the conditions for a Stabilized Surface area.

(iv) Any other control measures approved by the APCO and the USEPA as equivalent to the methods specified in subparagraphs (C)(4)(a)(i) through(C)(4)(a)(iii).

(5) Demolition Operations

(a) A person shall implement the requirements of (C)(5)(a)(i) through (C)(5)(a)(v) when using wrecking balls or other wrecking equipment to raze or demolish buildings:

(i) Apply sufficient water to building exterior surfaces and razed building materials to limit VDE to 20 percent opacity throughout the duration of razing and demolition activities;
(ii) Apply sufficient Dust Suppressants to unpaved surface areas where materials from razing or demolition activities will fall, or where wrecking or hauling equipment will be operated, in order to limit VDE to 20 percent opacity;
(iii) Handling, storage, and transport of Bulk Materials on-site or off-site resulting from the demolition or razing of buildings shall comply with the requirements specified in section (C)(6);
(iv) Prevention and removal of carryout or Track-out on paved public access roads from demolition operations shall be performed in accordance with (C)(3); or
(v) Any other control measures approved by the APCO and the USEPA as equivalent to the methods specified in subparagraphs (C)(5)(a)(i) through (C)(5)(a)(iv).

(6) Bulk Material Operations

(a) No person shall conduct an active operation of handling Bulk Material with a daily import or export of 100 cubic yards or more of Bulk Material without utilizing at least one of the measures listed for each of the operation stages specified in subparagraphs (C)(6)(a)(i) through (C)(6)(a)(vi):

(i) Handling of Bulk Materials:

a. When handling Bulk Materials, apply water or chemical/organic stabilizers/suppressants sufficient to limit VDE to 20 percent opacity; or
b. Construct and maintain wind barriers sufficient to limit VDE to 20 percent opacity and with less than 50 percent porosity. If utilizing fences or wind barriers, control measure (C)(6)(a)(i)[a.] shall also be implemented.

(ii) Storage of Bulk Materials:

a. When storing Bulk Materials, comply with the conditions for a Stabilized Surface;
b. Cover Bulk Materials stored outdoors with tarps, plastic, or other suitable material and anchor in such a manner that prevents the cover from being removed by wind action;
c. Construct and maintain wind barriers sufficient to limit VDE to 20 percent opacity and with less than 50 percent porosity. If utilizing fences or wind barriers, apply water or chemical/organic stabilizers/suppressants to limit VDE to 20 percent opacity;
d. Utilize a three-sided structure with a height at least equal to the height of the storage pile and with less than 50 percent porosity; or
e. Installation of wind breaks of such design so as to reduce maximum Wind Gusts to less than 25 miles per hour in the area of the Bulk Material deposits.

(iii) On-site Transporting of Bulk Materials:

a. Limit vehicular speed while traveling on the work site sufficient to limit VDE to 20 percent opacity;
b. Load all haul trucks such that the freeboard is not less than six inches when material is transported across any paved public access road sufficient to limit VDE to 20 percent opacity;
c. Apply water to the top of the load sufficient to limit VDE to 20 percent opacity; or
d. Cover haul trucks with a tarp or other suitable cover.

(iv) Off-site Transporting of Bulk Materials:

a. Clean the interior of the cargo compartment or cover the cargo compartment before the empty truck leaves the site;
b. Prevent spillage or loss of Bulk Material from holes or other openings in the cargo compartment's floor, sides, and/or tailgate; and
c. Load all haul trucks such that the freeboard is not less than six inches when material is transported on any paved public access road, and apply water to the top of the load sufficient to limit VDE to 20 percent opacity; or cover haul trucks with a tarp or other suitable cover.

(v) Outdoor Transport of Bulk Materials With a Chute or Conveyor:

a. Fully enclose the chute or conveyor;
b. Operate water spray equipment that sufficiently wets materials to limit VDE to 20 percent opacity; or
c. Wash separated or screened materials to remove conveyed materials having an aerodynamic diameter of ten microns or less sufficient to limit VDE to 20 percent opacity.

(vi) Any other control measures approved by the APCO and USEPA as equivalent to the methods specified in subparagraphs (C)(6)(a)(i) through(C)(6)(a)(v).

(7) Disturbed Open Area of Three or More Acres

(a) An owner/operator of an open area with a Disturbed Surface of three or more acres that has remained undeveloped, unoccupied, unused, or vacant for more than seven days shall do at least one of the following:

(i) Apply and maintain water or Dust Suppressant(s) to all unvegetated areas sufficient to limit VDE to 20 percent opacity;
(ii) Establish vegetation on all previously disturbed areas sufficient to limit VDE to 20 percent opacity;
(iii) Pave, apply and maintain gravel, or apply and maintain chemical/organic stabilizers/suppressants sufficient to limit VDE to 20 percent opacity;
(iv) Upon evidence of trespass, prevent unauthorized vehicle access by posting "No Trespassing" signs or installing physical barriers such as fences, gates, posts, and/or other appropriate barriers to effectively prevent access to the area; or
(v) Any other control measures approved by the APCO and the USEPA as equivalent to the methods specified in subparagraphs (C)(7)(a)(i) through(C)(7)(a)(iv).

(8) Unpaved Roads at Industrial or Commercial Facilities

(a) An owner/operator of an Unpaved Road at an industrial or commercial facility shall limit VDE to 20 percent opacity from the Unpaved Road segment by application and/or maintenance of at least one of the following control measures, or shall implement an APCO approved Dust Control Plan:

(i) Apply and maintain water or Dust Suppressant(s) sufficient to limit VDE to 20 percent opacity;
(ii) Pave, apply and maintain gravel, or apply and maintain chemical/organic stabilizers/suppressants sufficient to limit VDE to 20 percent opacity;
(iii) Restrict vehicle speed to 15 miles per hour; or
(iv) Any other method that effectively limits VDE to 20 percent opacity and results in a stabilized Unpaved Road surface.

(9) Unpaved Vehicle/Equipment Traffic Area

(a) An owner/operator of an unpaved vehicle/equipment traffic area shall limit VDE to 20 percent opacity from the unpaved vehicle/equipment traffic area by application and/or maintenance of at least one of the following control measures, or shall implement an APCO approved Dust Control Plan:

(i) Apply and maintain water or Dust Suppressant(s) sufficient to limit VDE to 20 percent opacity;
(ii) Pave, apply and maintain gravel, or apply and maintain chemical/organic stabilizers/suppressants sufficient to limit VDE to 20 percent opacity;
(iii) Restrict vehicle speed to 15 miles per hour;
(iv) An owner/operator shall restrict access and periodically stabilize a Disturbed Surface Area whenever a site becomes an Inactive Disturbed Surface Area to comply with the conditions for a Stabilized Surface; or
(v) Any other method that effectively limits VDE to 20 percent opacity and results in a Stabilized Surface.

(10) A person performing Earth-Moving Activities during High Wind Conditions shall:

(a) Cease all Active Operations; or

(b) Apply water to soil not more than 15 minutes prior to moving such soil to limit VDE to 20 percent opacity.

(11) The owner/operator of Disturbed Surface Areas during High Wind Conditions shall:

(a) Apply water with a mixture of Chemical Stabilizer diluted to not less than 1/20 of the concentration required to maintain a Stabilized Surface for a period of six months only on the last day of Active Operations prior to a weekend, holiday, or any other period when Active Operations will not occur for not more than four consecutive days;

(b) Apply Chemical Stabilizers prior to high wind event;

(c) Apply water to all unstabilized Disturbed Areas three times per day. Watering frequency should be increased to a minimum of four times per day if there is any evidence of visible Wind-Driven Fugitive Dust;

(d) Establish a vegetative ground cover within 30 days after Active Operations have ceased. Ground cover must be of sufficient density to expose less than 30 percent of unstabilized ground within 90 days of planting, and at all times thereafter;

(e) Apply Chemical Stabilizers within seven working days of grading completion; or

(f) Utilize any combination of control actions listed such that, in total, these actions apply to all Disturbed Surface Areas.

(12) Owners/operators of Unpaved Roads during high winds shall:

(a) Apply Chemical Stabilizers prior to wind event;

(b) Apply water once per hour during active operation; or

(c) Stop all vehicular traffic.

(13) Owners/operators of Open Storage Piles during high winds shall:

(a) Apply Chemical Stabilizers;

(b) Apply water to at lest 70 percent of the surface area of all Open Storage Piles on a daily basis when there is evidence of Wind-Driven Fugitive Dust;

(c) Install temporary coverings; or

(d) Install a three sided enclosure which will extend, at a minimum, to the top of the pile.

(14) Owners/operators of all categories during high winds shall:

(a) Use any other control measures approved by the APCO and the USEPA as equivalent to the methods specified in section (C).

(D) Dust Control Plan

(1) An owner/operator shall submit a Dust Control Plan (DCP) to the APCO prior to the start of any construction activity on any site that will include ten acres or more of Disturbed Surface Area for residential developments, or five acres or more of Disturbed Surface Area for non-residential development, or will include moving, depositing, or relocating more than 2,500 cubic yards per day of Bulk Materials on at least three days. Construction activities shall not commence until the APCO has approved or conditionally approved the DCP. An owner/operator shall provide written notification to the APCO within ten days prior to the commencement of Earth-Moving Activities via fax or mail. The requirement to submit a DCP shall apply to all such activities conducted for residential and non-residential (e.g., commercial, industrial, or institutional) purposes or conducted by any governmental entity.

(a) Install and maintain project signage with project contact prior to initiating any Earth-Moving Activities that;

(i) Identifies phone numbers for dust complaints; and
(ii) Meets minimum standards of Rule 403, Appendix "A".

(b) An owner/operator may submit one DCP covering multiple projects at different sites where construction will commence within the next 12 months provided the DCP includes each project size, location, and types of activities to be performed. The DCP shall specify the expected start and completion date of each project.

(c) The DCP shall describe all Fugitive Dust control measures to be implemented before, during, and after any dust generating activity.

(d) A DCP shall contain all the information described in section (D)(1)(h)(i) through (D)(1)(h)(viii). The APCO shall approve, disapprove, or conditionally approve the DCP within ten days of DCP submittal. A DCP is deemed automatically approved if, after ten days following receipt by the District, the District does not provide any comments to the owner/operator regarding the DCP.

(e) An owner/operator shall submit a copy of a DCP approval letter to the building and safety authority prior to issuance of a grading permit.

(f) An owner/operator shall retain a copy of an approved DCP at the project site. The approved DCP shall remain valid until the termination of all dust generating activities. Failure to comply with the provisions of an approved DCP is deemed to be a violation of this rule. Regardless of whether an approved DCP is in place or not, or even when the owner/operator responsible for the DCP is complying with an approved DCP, the owner/operator is still subject to comply with all requirements of Rule 403 at all times.

(g) An owner/operator shall maintain daily records to document the specific dust control actions taken, maintain such records for a period of not less than three years; and make such records available to the APCO upon request.

(h) A DCP shall contain all of the following information:

(i) Name(s), address(es), and phone number(s) of person(s) and owner(s)/operator(s) responsible for the preparation, submittal, and implementation of the DCP and responsible for the dust generating operation and the application of dust control measures.

(ii) A plot plan which shows the type and location of each project.

(iii) The total area of land surface to be disturbed, daily throughput volume of earthmoving in cubic yards, and total area in acres of the entire project site.

(iv) The expected start and completion dates of dust generating and soil disturbance activities to be performed on the site.

(v) The actual and potential sources of Fugitive Dust emissions on the site and the location of Bulk Material handling and storage areas, paved and Unpaved Roads; entrances and exits where carryout/Track-out may occur; and traffic areas.

(vi) Dust Suppressants to be applied, including: product specifications; manufacturer's usage instructions (method, frequency, and intensity of application); type, number, and capacity of application equipment; and information on environmental impacts and approvals or certifications related to appropriate and safe use for ground application.

(vii) Specific surface treatment(s) and/or control measures utilized to control material carryout, Track-out, and sedimentation where unpaved and/or access points join paved public access roads.

(viii) Identify a dust control supervisor that:

a. Is employed by or contracted with the property owner or developer;
b. Is on the site or available on-site within 30 minutes during working hours;
c. Has the authority to expeditiously employ sufficient dust mitigation measures to ensure compliance with Rule requirements; and
d. Has completed the AVAQMD Fugitive Dust Control Class and has been issued a valid Certification of Completion for the class.

(i) Notify the APCO in writing within 30 days after the site no longer qualifies as an active operation.

(j) Any approved DCP shall be valid for a period of one year from the date of approval or conditional approval of the DCP. DCPs must be resubmitted annually, at least 60 days prior to the expiration date, or the DCP shall become disapproved as of the expiration date. If all Fugitive Dust sources and corresponding control measures or special circumstances remain identical to those identified in the previously approved DCP, the resubmittal may contain a simple statement of no-change. Otherwise, a resubmittal must contain all the items specified in subparagraphs (D)(1)(h).

(E) Compliance Schedule

All the newly amended provisions of this rule shall become effective upon adoption of this rule amendment.

(F) Exemptions

(1) The provisions of this rule shall not apply to:

(a) Agricultural Operations.

(b) Unpaved Roads not part of an industrial or commercial facility.

(c) Any Disturbed Surface Area less than one-half acre on property zoned for residential uses.

(d) Active Operations conducted during emergency life-threatening situations, or in conjunction with any officially declared disaster or state of emergency.

(e) Active Operations conducted by essential service utilities to provide electricity, natural gas, telephone, water and sewer during periods of service outages and emergency disruptions.

(f) Any Contractor subsequent to the time the contract ends, provided that such Contractor implemented the required control measures during the contractual period.

(g) Any grading Contractor, for a phase of Active Operations, subsequent to the contractual completion of that phase of Earth-Moving Activities, provided that the required control measures have been implemented during the entire phase of Earth-Moving Activities, through and including five days after the final grading inspection.

(h) Weed abatement operations ordered by a county agricultural commissioner or any state, county, or municipal fire department, provided that:

(i) Mowing, cutting or other similar process is used which maintains weed stubble at least three inches above the soil; and

(ii) Any disking or similar operation which cuts into and disturbs the soil, where watering is used prior to initiation of these activities, and a determination is made by the agency issuing the weed abatement order that, due to fire hazard conditions, rocks, or other physical obstructions, it is not practical to meet the conditions specified in (F)(1)(h)(i). The provisions of this clause shall not exempt the owner of any property from stabilizing Disturbed Surface Areas which have been created as a result of the weed abatement actions.

(i) Blasting operations which have been permitted by the California Division of Industrial Safety.

(j) Motion picture, television, and video production activities when dust emissions are required for visual effects. In order to obtain this exemption, the APCO must receive notification in writing at least 72 hours in advance of any such activity and no nuisance results from such activity.

(2) The provisions of paragraphs (C)(1) through (C)(14) shall not apply:

(a) When high winds exceed 25 miles per hour, provided that:

(i) The required control measures for High Wind Conditions are implemented for each applicable Fugitive Dust source type, as specified in section (C)(10) through (C)(14);

(ii) Maintain daily records to document the specific actions taken;

(iii) Maintain such records for a period of not less than six months; and

(iv) Make such records available to the APCO upon request.

(b) To Unpaved Roads, provided such roads:

(i) Are used solely for the maintenance of wind-generating equipment; or

(ii) Meet all of the following criteria:

a. Are less than 50 feet in width at all points along the road;

b. Are within 25 feet of the Property Line; and

c. Have a traffic volume less than 20 vehicle-trips per day.

(c) To any Active Operation, Open Storage Pile, or Disturbed Surface Area for which necessary Fugitive Dust preventive or mitigative actions are in conflict with the federal Endangered Species Act.

(d) To Non-routine or emergency maintenance of flood control channels and water spreading basins.

(4) The provisions of section (C)(3) shall not apply to earth coverings of public Paved Roads where such coverings are approved by a local government agency for the protection of the roadway, and where such coverings are used as roadway crossings for haul vehicles.

(5) The provisions of section (D) shall not apply to:

(a) Officially-designated public parks and recreational areas, including national parks, national monuments, national forests, state parks, state recreational areas, and county regional parks.

(G) Fees

(1) Any person subject to a Dust Control Plan submittal pursuant to section (D) shall be assessed applicable filing and evaluation fees pursuant to Rule 306.

(2) The submittal of an annual statement of no-change, pursuant to section (D)(1)(i), shall not be considered as an annual review, and therefore shall not be subject to annual review fees, pursuant to Rule 306.

(3) The owner/operator of any facility for which the APCO conducts upwind/downwind monitoring for PM_{10} pursuant to section (C)(2) shall be assessed applicable Ambient Air Analysis Fees pursuant to Rule 304.1.

[SIP: Submitted as amended mm/dd/yy on mm/dd/yy; Submitted as amended 2/14/97 on 8/1/97; Submitted as amended 7/9/93 on 7/13/94; Approved 9/8/78, 43 FR 40011, 40 CFR 52.220(c)(39)(iii)(C); Approved 6/14/78, 43 FR 25684, 40 CFR 52.220(c)(32)(iv)(A)]

Appendix "A"

CONSTRUCTION SITE SIGNAGE GUIDELINES
(Minimum Requirements)

The purpose of this signage is to allow the public to contact the responsible party if Visible Dust Emissions or Track-out of material is observed from a construction site.

Project size	≥ Ten Acres
Sign size	48" x 96"

Sign Template

Permit # (if applicable)	4"
Site Name	4"
Project Name / Tract # # # #	4"
IF YOU SEE DUST COMING FROM THIS PROJECT CALL	4"
Name, Phone Number(XXX) XXX-XXXX	6"
If you do not receive a response, Please call The Antelope Valley AQMD at 1-877-723-8070	3"

Notes:

Signage must be located within 50 feet of each project site entrance.

No more than four signs are required per site/facility.

One sign is sufficient for multiple site entrances located within 300 yards of each other.

Text height shall be at a minimum as shown on right side of sign template above.

Sign background must contrast with lettering, typically black text with white background.

Sign should be one inch AC laminated plywood board.

The lower edge of the sign board must be a minimum of six feet and a maximum of seven feet above grade.

The telephone number listed for the contact must be a local or a toll-free number and shall be accessible 24 hours per day.

ANTELOPE VALLEY AIR POLLUTION CONTROL DISTRICT

RULE 407
Liquid And Gaseous Air Contaminants
(Adopted : 05/07/76; Amended: 04/02/82)

(a) A person shall not discharge into the atmosphere from any equipment:

1. Carbon monoxide (CO) exceeding 2,000 ppm by volume measured on a dry basis, averaged over 15 consecutive minutes.
2. Sulfur compounds which would exist as liquid or gas at standard conditions, calculated as sulfur dioxide (SO2) and averaged over 15 consecutive minutes, exceeding:
    A. In the South Coast Air Basin, 500 ppm by volume, effective July 1, 1982.
    B. In the Southeast Desert Air Basin portion of Riverside County:
        i. 500 ppm by volume for equipment which is issued a permit to construct or permit to operate after July 1, 1982.
        ii. 1,500 ppm by volume until January 1, 1984, and 500 ppm by volume thereafter for equipment that has been issued a permit to construct or permit to operate prior to July 1, 1982.

(b) The provisions of this rule shall not apply to emissions from:

1. Stationary internal combustion engines.
2. Propulsion of mobile equipment.
3. Emergency venting due to equipment failure or process upset.

(c) The provisions of subsection (a)(2) of this rule shall not apply to:

1. Equipment which is subject to the emission limits and requirements of source specific rules in Regulation XI.
2. Equipment which complies with the gaseous fuel sulfur content
3. limits of Rule 431.1.

[SIP: Approved 11/10/82 47 FR 50864, 40 CFR 52.220(c)(124)(iv)(A); Approved 9/8/76, 43 FR 40011, 40 CFR 52.220(c)(39)(iii)(C); Approved 6/14/78, 43 FR 25684, 40 CFR 52.220(c)(32)(iv)(A)]

ANTELOPE VALLEY AIR POLLUTION CONTROL DISTRICT

RULE 408
Circumvention
(Adopted : 05/07/76)

A person shall not build, erect, install, or use any equipment, the use of which, without resulting in a reduction in the total release of air contaminants to the atmosphere, reduces or conceals an emission which would otherwise constitute a violation of Chapter 3 (commencing with Section 41700) of Part 4, of Division 26 of the Health and Safety Code or of these rules. This rule shall not apply to cases in which the only violation involved is of Section 48700 of the Health and Safety Code, or Rule 402 of these Rules.

[SIP: Approved 9/8/76, 43 FR 40011, 40 CFR 52.220(c)(39)(iii)(C); Approved 6/14/78, 43 FR 25684, 40 CFR 52.220(c)(32)(iv)(A)]

ANTELOPE VALLEY AIR POLLUTION CONTROL DISTRICT

RULE 409
Combustion Contaminants
(Adopted: 04/07/76; Amended: 08/07/81)

A person shall not discharge into the atmosphere from the burning of fuel, combustion contaminants exceeding 0.23 gram per cubic meter (0.1 grain per cubic foot) of gas calculated to 12 percent of carbon dioxide (CO2) at standard conditions averaged over a minimum of 15 consecutive minutes.

The provisions of this rule shall not apply to jet engine test stands and emissions from internal combustion engines.

[SIP: Approved 7/6/82, 47 FR 29231, 40 CFR 52.220(c)(103)(xviii)(A); Approved 9/8/76, 43 FR 40011, 40 CFR 52.220(c)(39)(iii)(C); Approved 6/14/78, 43 FR 25684, 40 CFR 52.220(c)(32)(iv)(A)]

(**Adopted**: 11/04/77; **Amended:** 09/01/78; **Amended**: 02/02/79; **Amended** 01/08/82; **Amended**: 05/06/83; **Amended** 05/04/90; **Amended:** 04/05/91; **Amended**: 09/11/92; **Amended**: 10/02/92; **Amended**: 11/17/95; **Amended**: 08/21/12)

RULE 431.1
Sulfur Content of Gaseous Fuels

(A) General

(1) Purpose

(a) The purpose of this rule is to reduce sulfur oxides (SO_x) emissions from the burning of gaseous fuels in stationary equipment.

(2) Applicability

(a) The provisions of this rule shall apply to any burning, transferring, selling or the offering for sale of any gaseous fuels containing sulfur compounds in excess of 16 parts per million by volume (ppmv), calculated as hydrogen sulfide (H_2S), in stationary equipment requiring a Permit to Operate (PTO) by the Antelope Valley Air Quality Management District (District).

(B) Definitions

(1) "Air Pollution Control Officer" (APCO) – The person appointed to the position of Air Pollution Control Officer of the District pursuant to the provisions of California Health & Safety Code §40750, and his or her designee.

(2) "Authority to Construct Permit" (ATC) – A District permit required pursuant to the provisions of District Rule 201 which must be obtained prior to the building, erecting, installation, alteration or replacement of any Permit Unit. Such permit may act as a temporary PTO pursuant to the provisions of District Rule 202.

(3) Burn – To combust any gaseous fuel, whether for useful heat or by incineration without heat recovery, except for flaring of emergency vent gases.

(4) "California Air Resources Board" (CARB) – The California State Air Resources Board the powers and duties of which are described in Part 2 of Division 26 of the California Health & Safety Code (commencing with section 39500).

(5) Continuous Emission Monitoring System (CEMS) – A system of equipment that continuously measures and records all parameters necessary to directly determine

concentrations and/or mass emissions of selected pollutants, and which meets all of the requirements of Attachment A, Section II.

(6) Continuous Fuel Gas Monitoring System" (CFGMS) – A system of equipment that continuously measures and records total sulfur concentration in the gaseous fuel prior to burning, and which meets all the requirements of Attachment A, Section I.

(7) "Continuous Monitor" – a CEMS or CFGMS.

(8) Daily Average – An arithmetic mean of all of a facility's sulfur compounds readings within a calendar day obtained according to the guideline specified in Attachment A.

(9) "District" – The Antelope Valley Air Quality Management District, the geographical area of which is described in District Rule 103.

(10) Emergency Vent Gas – Any gas released from a process unit as a result of any process upset or breakdown.

(11) Gaseous Fuel – Any gaseous material which releases heat when burned including, but not limited to, any natural, refinery, field produced, process, synthetic, landfill, sewage digester, or waste gases with a gross heating value of 2670 kilocalories per cubic meter (300 BTU per cubic foot) or higher, at standard conditions.

(12) Landfill Gas – Any gas derived through any biological process from the decomposition of organic waste buried within a waste disposal site.

(13) Monthly Weighted Average Sulfur Content – The result of the summation of average daily sulfur contents of the fuel(s) consumed multiplied by the average daily consumption rates of the fuel(s) consumed in any month divided by the total gaseous fuel consumption rate for that month.

(14) Natural Gas – A mixture of gaseous hydrocarbons, with at least 80 percent methane (by volume), and of pipeline quality, such as the gas sold or distributed by any utility company regulated by the California Public Utilities Commission.

(15) "Permit to Operate" (PTO) – A District permit required pursuant to the provisions of District Rule 203 which must be obtained prior to operation of a Permit Unit. An ATC may function as a temporary PTO pursuant to the provisions of District Rule 202.

(16) Refinery Gas – Any combustible gaseous by-product generated from a petroleum refinery process unit operation, with a gross heating value of 2670 kilocalories per cubic meter (300 BTU per cubic foot) or higher, at standard conditions.

(17) Sewage Digester Gas – Any gas derived from anaerobic decomposition of organic sewage within its containment.

(18) "South Coast Air Quality Management District" – The air quality district created pursuant to Division 26, Part 3, Chapter 5.5 of the California Health & Safety Code (commencing with §40400).

(19) Standard Conditions – The atmospheric state where the temperature is 60°F and barometric pressure is 14.7 pounds per square inch absolute.

(20) Stream Day – Any day or part of a day when a facility or a process unit is in operation.

(21) "United States Environmental Protection Agency" (USEPA) - The United States Environmental Protection Agency, the Administrator of the USEPA and his or her authorized representative.

(C) Requirements

(1) Natural gas

A person shall not sell or offer for sale for use in the jurisdiction of the District natural gas containing sulfur compounds, calculated as H_2S, in excess of 16 parts per million by volume (ppmv).

(2) Other Gaseous Fuels

A person shall not burn in equipment requiring a PTO, purchase, transfer, sell or offer for sale for use in the jurisdiction of the District, any gaseous fuel containing sulfur compounds, calculated asH_2S, in excess of the concentration limits as measured over the averaging periods for various gaseous fuels as specified in Table 1.

TABLE 1

Fuel Type	Sulfur Limits ppmv	Averaging Periods
Refinery Gas	40	4 hrs
Landfill Gas	250	Daily
Sewage Digester Gas	40 or	Daily or
	40 and 500	Monthly and 15-minutes
Other Gases	40	4 hrs

(3) Previously Exempt or Previously Compliant Facilities

A person burning gaseous fuel containing sulfur compounds in excess of the limits specified in Table 1 and whose facility had been previously exempt from this rule pursuant to subsection (G)(6); or any person who, without the use of any sulfur removal or control system, had been previously in compliance with the limits specified in Table 1, shall:

(a) Submit for approval by the APCO within 30 days from the time of exceedance or non-compliance, a plan to demonstrate compliance with the requirements of the rule;

(b) Submit to the APCO an application for a fuel gas control system within six months of the time of exceedance of the exemption criteria specified in subsection (G)(6), or non-compliance with the limit;

(c) Demonstrate compliance with the limit specified in Table 1 no later than 18 months after the time of exceedance; and

(d) Comply with subsections (D)(1) and (D)(2), or (D)(3).

(D) Monitoring Requirements

(1) Except as provided in subsection (D)(3), a person burning gaseous fuels, other than exclusively natural gas, in stationary equipment requiring a PTO by the District shall have a properly operating continuous fuel gas monitoring system (CFGMS) to determine the sulfur content, calculated as H_2S, of the fuel gas prior to burning, or a continuous emission monitoring system (CEMS) to determine SO_x emissions after burning. All continuous monitors, require District approval, which shall be based on the requirements as specified in Attachment A.

(a) A person shall install the CFGMS upstream of any mixing of refinery gases with natural gas, propane or other fuels.

(b) A person subject to subsection (C)(3) of this rule shall comply with subsections (D)(1) and (D)(2) no later than twelve months after the date an ATC is issued by the District for a sulfur removal system or comply with subsection (D)(3).

(c) Compliance with the Table 1 sulfur limits shall be determined based on readings obtained from an approved Continuous Monitor.

(2) A person installing a Continuous Monitor shall submit to the District for approval, a quality assurance procedure as specified in USEPA 40 CFR Part 60, Appendix F, Procedure 1 for CEMS and, as applicable, for CFGMS.

(a) The quality assurance procedure specified above shall be submitted to the District for written approval by the APCO prior to the CFGMS or CEMS final certification.

(b) Any CFGMS or CEMS deemed to be out of control, as specified in Attachment A, according to the facility quality assurance procedure approved by the APCO shall be corrected within 72 hours.

(i) The person operating the CFGMS or CEMS shall notify the APCO by telephone or facsimile of any breakdown(s) of the monitoring systems if the duration of the breakdown is in excess of 60 minutes or if there are three (3) or more breakdowns in any one day within 24 hours of the occurrence of the breakdown which triggers notification. Such report shall identify the time, location, equipment involved, and contact person.

(ii) The person who complies with the provisions of subsection (D)(2)(b)(i) and subsection (E) (3) shall not be considered in violation of this rule for the 72 hour period of breakdown provided that the breakdown did not result from operator error, neglect or improper operation or maintenance procedures.

(3) A person burning landfill gas or sewage digester gas, or who is subject to subsection (C)(3) of this rule may use an alternative monitoring method, in lieu of the requirements in subsections (D)(1) and (D)(2), that ensures compliance with the daily total sulfur content limitation as specified in Table 1. Alternative monitoring methods shall not be used unless first approved in writing by the APCO, the California Air Resources Board (CARB), and the Regional Administrator of the Environmental Protection Agency (EPA), Region IX, or their designees.

(a) At a minimum, the alternative monitoring method shall meet the guidelines of Attachment A, Section III.

(b) A person subject to subsection (C)(3) of this rule shall submit an alternative monitoring method for approval no later than 45 days after the date an ATC for a sulfur removal system is issued.

(c) All monitoring must comply with the approved alternative monitoring method.

(d) District personnel shall use the approved alternative monitoring method to determine compliance with the limits of this rule.

(E) Reporting and Recordkeeping Requirements

(1) All records required by this rule shall be maintained at the facility for at least five (5) years, and be made available to District staff upon request.

(2) Except at electric utility generating facilities and refineries, a person burning gaseous fuel, other than exclusively natural gas, in stationary equipment requiring a PTO, shall submit to the APCO annual reports of the monthly fuel consumption and the total sulfur content of the fuel consumed. The annual report shall be submitted no later than 60 days following the end of the reporting year, and shall consist of the amount of any gaseous fuel consumed monthly, the applicable hourly, daily or monthly average sulfur content as determined by the Continuous Monitor or approved alternative monitoring method as specified in subsections (D)(1), (D)(2), or (D)(3) of this rule, and total SO_x emissions, calculated as SO_2.

(3) A person burning gaseous fuel in stationary equipment located at electric utility generating facilities or refineries shall submit to the APCO monthly reports of the daily fuel consumption, the monthly weighted average sulfur content (except for natural gas), and the maximum four (4)-hour average sulfur content of the fuel consumed, as determined by the device specified in subsection (D)(2) of this rule and the total SO_x emissions, calculated as SO_2. The report shall be submitted no later than 30 days following the end of the reporting month.

(4) The person operating a continuous monitor shall keep records as specified in clause (D)(2)(b)(i) for monitor breakdown (s)

(F) Test Methods

The following may be used by the APCO to verify compliance with the provisions of this rule:

(1) For determination of compliance with sulfur content requirements of section (C):

(a) The reference method for determining the concentration of sulfur compounds in a gaseous fuel, calculated as H_2S, shall be South Coast Air Quality Management District (SCAQMD) Method 307-91 - Determination of Sulfur in a Gaseous Matrix, or any other method demonstrated by the applicant to be equivalent and approved in writing by the APCO, the CARB, and the Regional Administrator of the EPA, Region IX, or their designees, or

(b) Data obtained from a continuous monitor, which is required to be installed and properly operated according to section (D) and as approved by the APCO pursuant to the requirements specified in Attachment A.

(2) The gross heating value of gaseous fuels shall be determined by ASTM Method D 3588-91 or, if applicable, ASTM Method D 4891-89.

(3) The methane content of gaseous fuels shall be determined by ASTM Method D 1945-81.

(G) Exemptions

Unless otherwise specified, and provided that the person seeking the exemption supplies proof and verification upon request of applicable criteria to the satisfaction of the APCO, the provisions of this rule shall not apply to the following:

(1) A person selling, for use in the jurisdiction of the District, any gaseous fuel not complying with subsections (C)(1) and (C)(3) provided that:

(a) The gaseous fuel is delivered directly to a sulfur removal unit which is in full operation and which reduces the sulfur content to the limits specified in subsections (C)(1) and (C)(3);

(b) The seller notifies the APCO prior to any such sale of the quantity, heating value, and composition of the gaseous fuel to be sold; and

(c) The buyer has an approved ATC and/or PTO for the sulfur removal unit that will be used to treat the purchased gas.

(2) Gaseous fuels containing sulfur used in the production of sulfur or sulfur compounds.

(3) Waste gases being burned provided that:

(a) The gross heating value of such gases is less than 2670 kilocalories per cubic meter (300 British Thermal Units per cubic foot) at standard conditions; and

(b) Any supplemental fuel used to burn such waste gases does not contain sulfur or sulfur compounds in excess of the amount specified in this rule.

(4) Gases vented to a control system pursuant to District Rule1173.

(5) Gases vented intermittently to fuel gas or waste disposal system from pressure control valves, sight glasses, compressor bottles, sampling systems, and pump and compressor case vents.

(6) Any facility which emits less than five (5) pounds per day total sulfur compounds, calculated as H_2S, from the burning of gaseous fuels other than natural gas. Emissions of total sulfur compounds shall be measured based on fuel analysis, using the test method specified in subsection (F)(1), and the maximum daily gaseous fuel consumption. This exemption shall not apply to the requirement of subsection (C)(1).

(7) A person is exempt from the requirements of subsection (D)(1) if the person demonstrates to the satisfaction of the APCO that the supplier of the gaseous fuel has complied with the requirements of section (D) for such fuel.

(8) On or after July 1, 1997, a person previously in compliance with the limits specified in Table 1 of this rule shall be exempt from the requirements of subsection (C)(3) provided that: the alternative monitoring method pursuant to section (D) yields no more than three individual readings in a calendar year in excess of the limits specified in Table 1; that no single reading exceeds a fuel sulfur limit by 25 percent; and that the sampling frequency is no longer than once per week.

See SIP Table at http://www.avaqmd.ca.gov/Modules/ShowDocument.aspx?documentid=921

ATTACHMENT A

SECTION I
REQUIREMENTS FOR CONTINUOUS
FUEL GAS MONITORING SYSTEM (CFGMS)

A continuous fuel gas monitor used for determining the sulfur content of any gaseous fuel shall:

(1) Continuously monitor and record the concentration by volume (dry basis) of sulfur compounds in ppmv as H_2S in the gaseous fuel.
(2) Have the span value of the monitor set so that all readings fall between 20 and 95 percent of scale.
(3) Check for calibration drift of the monitoring system at least once daily (approximately 24-hr interval) at two concentrations, one high level and one low level. Whenever the daily high level or low level calibration drift exceeds 5% of analyzer full scale span, the monitoring system shall be deemed to be out of control and subject to the requirements of subsection (D)(2(b) of this rule.
(4) Determine the relative accuracy of the monitor which shall be no greater than 20 percent of the mean value of the reference method test data.
(5) Be able to record negative values of zero drift.
(6) Report the concentration of the sulfur compounds calculated as H_2S.

SECTION II
REQUIREMENTS FOR CONTINUOUS
EMISSIONS MONITORING SYSTEMS (CEMS)

A stack CEMS used for monitoring the sulfur dioxide emissions from the burning of any gaseous fuel shall:

(1) Continuously monitor and record the concentration by volume (dry basis, zero percent excess air) of sulfur compounds in ppmv as SO_2 emitted into the atmosphere;
(2) Include either an oxygen monitor for correcting the data for excess air or a fuel gas and exhaust gas flowmeter for the determination of mass emissions;
(3) Have the span value of all the monitors set so that all readings fall between 20 and 95 percent, for four-hour and daily averages, and between 10 and 95 percent, for monthly averages, of full scale;
(4) When using an oxygen monitor for the correction of excess air, be able to measure a sulfur compound concentration emission limit of 5 ppm (dry basis, zero percent excess air), which is stoichiometrically equivalent to the limit of sulfur compound content of 40 ppm calculated as hydrogen sulfide in the gaseous fuels;
(5) Use District Methods 100.1 or 6.1 (as applicable for sulfur compound analysis) and SCAQMD Method 3.1 (for oxygen content analysis), or SCAQMD Method 2.1 (for flowrate determination), whichever is applicable, or any other methods demonstrated by

the applicant to be equivalent and approved in writing by the APCO and the CARB, and the Regional Administrator of the EPA, Region IX, or their designees, for conducting the relative accuracy evaluations. The relative accuracy limit shall be 1 ppm and zero drift (2-hour and 24-hour) and calibration drift (2-hour and 24-hour) limits for sulfur compounds monitor shall be 5 percent of the span range; and

(6) Check for calibration drift of the monitoring system at least once daily (approximately 24-hr interval) at two concentrations, one high level and one low level. Whenever the daily high level or low level calibration drift exceeds 5% of analyzer full scale span, the monitoring system shall be deemed to be out of control and subject to the requirements of subsection (D)(2)(b) of this rule.

(7) Facilities burning fuel gas subject to this rule shall comply with the requirements of Rule 218 and 218.1(proposed) except where specific requirements have been incorporated into this rule.

SECTION III – GUIDELINES FOR APPROVAL OF ALTERNATIVE MONITORING PLAN BY THE APCO

In lieu of a continuous fuel gas monitoring system (CFGMS) or a continuous emission monitoring system (CEMS), a person subject to this rule may submit an alternative monitoring plan to the APCO, the California Air Resources Board (CARB), and the Regional Administrator of the Environmental Protection Agency (EPA), Region IX, or their designees. for their review and decision.

(1) A test program to determine the correlation between H_2S and total sulfur in the fuel gas using SCAQMD Method 307-91. If a correlation is established, a colorimetric test, or other alternative method approved by the APCO as being equivalent or better in establishing such correlation, may be conducted regularly to determine total sulfur using H_2S as a surrogate.

(2) An error analysis between colorimetric, or other approved alternative method readings and the total reduced sulfur analysis obtained from SCAQMD Method 307-91. To demonstrate equivalency between the two methods of analyses, the relative accuracy shall not exceed 20 percent of average SCAQMD Method 307-91 readings.

(3) A schedule for a daily or more frequent analysis of the fuel gas for H_2S using the colorimetric test, or other approved alternative method, and a minimum weekly analysis of the fuel gas using SCAQMD Method 307-91. A different frequency of analysis may be used if the APCO determines that such frequency will ensure compliance with the daily total sulfur limits of this rule.

(4) When the sulfur level is suspected to be at or above the sulfur content requirements of Table 1 as determined by the colorimetric or other alternative method, a procedure to obtain at minimum a daily sample to be tested according to SCAQMD Method 307-91 until three consecutive daily samples show that total sulfur is below the sulfur content requirements of Table 1.

1.25.79

Rule 431.2 Sulfur Content of Liquid Fuels — Revised October / Adopted Decemb

(a) A persons shall not burn any liquid fuel having a sulfur content in excess of 0.5 percent by weight.

(1) Effective June 1, 1979, a person shall not burn in refinery equipment any liquid fuel having a sulfur content in excess of 0.25 percent by weight except that:

(A) Existing supplies of fuel with a sulfur content of not more than 0.5 percent by weight owned, either in storage or in transit on the effective date of paragraph (a)(1) may be utilized until such supply is exhausted.

(B) Noncomplying fuel may be burned if the concentration of sulfur dioxide in stack gases is no more than would be present if liquid fuel with a sulfur content of not more than 0.25 percent by weight were burned.

(b) Steam Generators at Electric Power Plants

(1) No person shall burn liquid fuel with a sulfur content of more than 0.25 percent by weight in a steam generator at an electric power plant on or after March 1, 1977 except that:

(A) Existing supplies of fuel with a sulfur content of not more than 0.5 percent by weight owned, either in storage or in transit on the effective date of this subsection (b) may be utilized until such supply is exhausted.

(B) From March 1, 1977, to July 1, 1978, if sufficient amounts of fuel with a sulfur content of not more than 0.25 percent by weight available on a regularly scheduled future need basis, fuel with a sulfur content of not more than 0.5 percent by weight may be substituted for only such portion of a person's requirements for which fuel with a sulfur content of not more than 0.25 percent by weight is not available.

(C) Noncomplying fuel may be burned if the concentratio of sulfur dioxide in stack gases is no more than would be present if liquid fuel with a sulfur content of not more than 0.25 percent were burned..

(2) Persons burning liquid fuels in steam generators at electric power plants shall submit to the Executive Officer, within thirty calendar days from the beginning of each month, a tabulation of the amount of liquid fuel burned at each of such person's power plants on each day of the preceding month, also listing, for each day, the average sulfur content of the fuel burned each day. If noncomplying fuel was burned a statement of the efforts made to obtain liquid fuel with a sulfur content by weight of 0.25 percent shall be submitted under penalty of perjury.

(c) The provisions of this rule shall not apply to:

(1) The burning of liquid sulfur compounds used in the manufacturing of sulfur or sulfur compounds.

(2) The use of liquid fuels where the gaseous products of combustion are used as raw materials for other processes.

(3) The use of liquid fuel to propel or test any vehicle, aircraft, locomotive, boat or ship.

(4) The use of a liquid fuel with higher sulfur content where process conditions or control equipment remove sulfur compounds from the stack gases to the extent that the emission of sulfur compounds into the atmosphere is no greater than that which could be emitted by using a fuel which complies with the provisions of this rule.

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(c) (5) The use of liquid fuel at remote pipeline pumping stations where the Executive Officer determines that conditions do not allow the use of alternate fuels, pollution control equipment, or electric equipment; provided that the increased emissions from operation under this exemption, if any, are compensated by a reduction of at least twice such increased emissions at other locations within the Air Basin in which such pumping station is located.

ANTELOPE VALLEY AIR POLLUTION CONTROL DISTRICT

RULE 432
Gasoline Specifications
(Adopted: 05/07/76)

A person shall not sell or supply for use within the District as a fuel for motor vehicles defined by the Vehicle Code of the State of California, gasoline having a degree of unsaturation greater than that indicated by a Bromine Number of 30 as determined by ASTM Method D1159-66.

[SIP: Approved 9/8/78, 43 FR 40011, 40 CFR 52.220(c)(39)(iii)(C); Approved 6/14/78, 43 FR 28684, 40 CFR 52.220(c)(32)(iv)(A)]

(**Adopted:** 05/07/76; **Amended:** 9/02/77; **Amended:** 03/03/78;
Amended: 07/06/79; **Amended:** 03/05/82 **Amended:** 11/15/05)

Rule 442
Usage of Solvents

(A) General

(1) Purpose

(a) To reduce volatile organic compound (VOC) emission from VOC containing materials or equipment which is not subject to VOC limits of any rule found in District Regulation XI – *Source Specific Standards*.

(b) To provide emissions limits for the use of non-VOC organic solvents.

(2) Applicability

(a) This rule applies to any person using VOC containing materials or Emissions Unit which is not subject to the VOC limits of any other rule found in District Regulation IV – *Prohibitions* or in any rule found in the District Regulation XI – *Source Specific Standards*.

(i) VOC containing materials include, but are not limited to; coatings, resins, adhesives, inks, solvents, thinners, diluents, mold seal and release compounds, lubricants, cutting oils and quenching oils.

(b) This rule applies to any person using an organic solvent which is not a VOC and which is not subject to the limits of any other rule found in District Regulation IV – *Prohibitions* or in any rule found in District Regulation XI – *Source Specific Standards*.

(B) Definitions

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

(1) Aerosol Product – A hand held, non-refillable container that expels pressurized materials by means of a propellant-induced force.

(2) California Air Resources Board (CARB) - The California State Air Resources Board the powers and duties of which are described in Part 2 of Division 26 of the California Health & Safety Code (commencing with section 39500).

(3) District - The Antelope Valley Air Quality Management District the geographical area of which is described in District Rule 103.

(4) Emissions Unit – Any article, machine, equipment contrivance or combination thereof which emits or has the potential to emit any Regulated Air Pollutant.

(5) Facility – Any structure, building, Emissions Unit, combination of Emissions Units or installation which emits or may emit a Regulated Air Pollutant and which are:

(a) Located on one or more contiguous or adjacent properties within the District;

(b) Under the control of the same person (or by persons under common control);

(c) Belong to the same industrial grouping, as determined by being within the same two digit Standard Industrial Classification Code (SICC).

(d) For the purpose of this Rule, such above-described grouping, remotely located but connected only by land carrying a pipeline, shall not be considered one Facility.

(6) Regulated Air Pollutant – Any of the following:

(a) Any air pollutant and its precursors for which an Ambient Air Quality Standard has been promulgated.

(b) Any air pollutant that is subject to a standard under 42 U.S.C. §7411, Standards of Performance for New Stationary Sources (Federal Clean Air Act §111) or the regulations promulgated thereunder.

(c) Any substance which has been designated a Class I or Class II substance under 42 U.S.C. §7671a (Federal Clean Air Act §602) or the regulations promulgated thereunder.

(d) Any air pollutant subject to a standard or other requirement established pursuant to 42 U.S.C. §7412, Hazardous Air Pollutants (Federal Clean Air Act §1112) or the regulations promulgated thereunder.

(7) South Coast Air Quality Management District (SCAQMD) – The local air district created pursuant to Division 26, Part 3, Chapter 5.5 of the Health & Safety Code (commencing with §40400).

(8) United States Environmental Protection Agency (USEPA) - The United States Environmental Protection Agency, the Administrator of the USEPA and his or her authorized representative.

(9) Volatile Organic Compound (VOC) – Any volatile compound of carbon, excluding carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates, ammonium carbonate and those compounds listed in 40 CFR 51.1100(s)(1).

(C) Requirements

(1) Emission Limitations

(a) A person shall not discharge VOCs into the atmosphere from all VOC containing materials, Emissions Units, equipment or processes subject to this rule, in excess of 540 kilograms (1,190 pounds) per month per Facility.

(i) Compliance with the provisions of subsection (C)(1)(a) above may be obtained through use of any of the following or any combination thereof:

a. Product reformulation or substitution;
b. Process changes;
c. Improvement of operational efficiency;
d. Development of innovative technology;
e. Installation of a control device operated in accordance with section (C)(2) below.

(2) Control Equipment

(a) A person may comply with the provisions of (C)(1) above by using a VOC emission collection and control system that reduces overall emissions by eighty-five percent (85%) as follows:

(i) The system shall capture at least ninety percent (90%), by weight, of the emissions generated by the Emissions Unit, material or operation and

a. Have a destruction efficiency of at least ninety-five percent (95%), by weight; or
b. Have an output of less than fifty parts per million(50 PPM) calculated as carbon with no dilution.

(3) Storage and Disposal

(a) All VOC containing materials subject to this rule, whether in its form for intended use or as a waste or used product, shall be stored in non-absorbent, non-leaking containers which shall be kept closed at all times, except when filling or emptying, and disposed of in a manner to prevent evaporation of VOCs into the atmosphere at the Facility.

(D) Exemptions

(1) The provisions of this rule shall not apply to:

(a) The manufacture, transport or storage of organic solvents, or the transport or storage of materials containing organic solvents.

(b) The emissions of VOCs from VOC-containing materials or equipment which are subject to other Regulation IV rules (excluding Rule 481 – Spray Coating Operations) or which are exempt from air pollution control requirements by such rules.

(c) The use of pesticides including insecticides, rodenticides or herbicides.

(d) The use of 1,1,1 trichloroethane, methylene chloride and trichlorotrifluroethane.

(e) Aerosol products

(E) Monitoring, Recordkeeping and Reporting

(1) Usage records for all VOC-containing materials subject to this Rule shall be maintained pursuant to Rule 109.

(2) Such records shall be retained for two years and shall be made available upon request.

(F) Test Methods

(1) For the purpose of this rule, the following test methods shall be used:

(a) Determination of VOC Content in Solvent-containing materials

(i) The VOC content of VOC-containing materials subject to the provisions of this rule shall be determined by USEPA Reference Method 24 (Code of Federal Regulations, Title 40, Part60, Appendix A).

(ii) The exempt compounds' content shall be determined by SCAQMD Method 303 - *Determination of Exempt Compounds* or Method 304 - *Determination of Volatile Organic Compounds (VOC) in Various Materials* contained in the SCAQMD "Laboratory Methods of Analysis for Enforcement Samples" manual.

(iii) The following classes of Exempt Perfluorocarbon 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 sulfur bonds only to carbon and fluorine, will be analyzed as exempt compounds for compliance with Section (C)(1), only when manufacturers specify which individual compounds are used in the solvent formulation

and identify the USEPA, CARB, and the District approved test methods used to quantify the amount of each exempt compound.

(b) Determination of Presence of VOC in Clean-up Materials

(i) The presence of VOC in the headspace over the cleaning material shall be determined by SCAQMD Method 313 - Determination of Volatile Organic Compounds (VOC) by Gas Chromatography/Mass Spectrometry (GC/MS) as contained in the SCAQMD "Laboratory Methods of Analysis for Enforcement Samples" manual.

(c) Determination of Efficiency of Emission Control Systems

(i) The capture efficiency of the capture system for purposes of determining overall efficiency shall be determined by verifying the use of a permanent total enclosure and 100% capture efficiency as defined by USEPA Method 204 - *Criteria for and Verification of a Permanent or Temporary Total Enclosure*."

(ii) Alternatively, if a USEPA Method 204 defined permanent total enclosure is not employed, capture efficiency shall be determined using a minimum of three sampling runs subject to data quality criteria presented in the USEPA *Guidelines for Determining Capture Efficiency*, January 9, 1995."

(iii) Individual capture efficiency test runs subject to the US EPA technical guidelines shall be determined by the Temporary Total Enclosure approach of USEPA Methods 204 through 204F.

(iv) The control device efficiency of an emission control system on a mass emissions basis and the VOC concentrations in the exhaust gases, measured and calculated as carbon, shall be determined by US EPA Test Methods 25, 25A, SCAQMD Method 25.1 - *Determination of Total Gaseous Non-Methane Organic Emissions as Carbon*, or SCAQMD Method 25.3 – *Determination of Low Concentration Non-Methane Non-Ethane Organic Compound Emissions from Clean Fueled Combustion Sources*, as applicable.

(v) USEPA Test Method 18, or CARB Method 422 shall be used to determine emissions of exempt compounds.

(vi) The overall efficiency of an emission collection and control system shall be determined using the following equation (all efficiencies expressed in percent):
Overall Efficiency
= (Capture Efficiency) x (Control Device Efficiency) / 100

(d) Any other applicable test methods approved by CARB, the USEPA, and the District.

(2) Multiple Test Methods

(a) When more than one test method or set of test methods are specified for any testing, the application of these methods to a specific set of test conditions is subject to approval by the Air Pollution Control Officer.

(3) All test methods referenced in this section shall be the most recent version as approved by USEPA.

(4) Violation of any requirement of this rule established by any one of the specified test methods or set of test methods shall constitute a violation of the rule.

[SIP: Approved 11/16/83, 48 FR 52054, 40 CFR 52.220(c)(125)(ii)(D); Approved 9/28/81, 46 FR 47451, 40 CFR 52.220(c)(58)(ii)(B); Approved 9/8/78, 43 FR 40011, 40 CFR 52.220(c)(39)(iii)(C)]

ANTELOPE VALLEY AIR POLLUTION CONTROL DISTRICT

Rule 443
Labeling Of Solvents
(Adopted: 04/07/75)

(a) A person shall not sell or offer for sale for use in the District, in containers of 0.94 liter (one quart) capacity or larger, any organic solvent or material containing organic solvent unless it is clearly and correctly indicated on the container whether the solvent is photochemically reactive in accordance with the definition in Rule 102. This requirement may be satisfied by affixing a sticker or label to the container which sets forth this information.

(b) A person shall not sell or offer for sale for use in the District, in containers of 150 liters (40 gallons) capacity or larger, any organic solvent unless the total percentage by volume of the solvents listed under the definition of photochemically reactive solvent in Rule 102 is clearly and correctly indicated on the container. This requirement may be satisfied by affixing a sticker or label to the container which sets forth this information.

(c) When such materials are sold in bulk, the information required in subsections (a) and (b) must appear on the invoice in lieu of the container, and a copy of the invoice must be made available for inspection by District personnel. (For the purposes of this subsection only, materials sold in bulk shall be considered to be materials which are transferred from a delivery container located on the premise of the user or processor.)

(d) The provisions of this rule shall not apply to architectural coatings, materials registered by the USDA as insecticides, pesticides and herbicides and materials primarily used as fuels.

(e) This rule becomes effective on January 1, 1977.

[SIP: Approved 9/8/78, 43 FR 40011, 40 CFR 52.220(c)(39)(iii)(C); Approved 6/14/78, 43 FR 25684, 40 CFR 52.220(c)(32)(iv)(A)]

(**Adopted:** 10/08/76; **Amended:** 10/02/81; **Amended**: 10/02/87; **Amended**: 02/19/08)

RULE 444
Open Outdoor Fires

(A) General

(1) Purpose

(a) The purpose of this Rule is to ensure that the ambient air quality is not significantly degraded due to Open Outdoor Fires; and,

(b) To apply the District Smoke Management Program to specified applications while minimizing smoke impacts to the public.

(2) Applicability

(a) The requirements of this Rule shall apply to persons that set and/or permit Open Outdoor Fires, including, but not limited to Tumbleweed burning, Agricultural Burning, field crop burning, Range Improvement Burning, Forest Management Burning, and Wildland Vegetation Management Burning.

(B) Definitions

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

(1) "Agricultural Burning" – Open Outdoor Fires used in Agricultural Operations, including the burning of Agricultural Wastes, or Open Outdoor Fires used in disease and pest prevention. Agricultural Burning also includes Open Outdoor Fires used in the operation or maintenance of a system for the delivery of water in Agricultural Operations.

(2) "Agricultural Operations" – Any operation occurring on a ranch or farm directly related to the growing of crops or raising of fowls or animals for the primary purpose of making a profit, for a livelihood, or for conducting agricultural research or instruction by an educational institution.

(3) "Agricultural Wastes" – Unwanted or unsalable materials produced wholly from Agricultural Operations, including forest management or range management operations, wildland vegetation management burning, and prescribed burning. Agricultural Wastes do not include pesticide and fertilizer containers, except sacks, burned in the field where they were emptied. Agricultural Wastes do not include broken boxes, pallets, sweat boxes, packaging material, packing boxes, or

any other materials produced in the packing or processing of agricultural products.

(4) "Air Pollution Control Officer" (APCO) – The person appointed to the position of Air Pollution Control Officer of the District pursuant to the provisions of California Health & Safety Code §40750, and his or her designee.

(5) "Approved Ignition Devices" – Those instruments or materials that will ignite combustible material without the production of black smoke by the ignition device. This would include such items as liquid petroleum gas, butane, propane, and flares where the device produces a flame and the flame is then used for ignition. For the purposes of igniting Prescribed Burns, heli-torch, terra-torch, drip-torch, and the equivalent ignition devices and methods will be considered approved ignition devices.

(6) "California Air Resources Board (CARB)" – The California State Air Resources Board, the powers and duties of which are described in Part 2 of Division 26 of the California Health and Safety Code (commencing with §39500).

(7) "Designated agency" – Any agency designated by the CARB as having authority to issue agricultural burning, including prescribed burning, permits. The United States Department of Agriculture Forest Service and Cal Fire are so designated within their respective areas of jurisdiction.

(8) "Forest Management Burning" – The use of Prescribed Burning, as part of a forest management practice, to remove forest debris. Forest management practices include Timber Operations, Silvicultural practices, and forest protection practices.

(9) "Imminent and Substantial Economic Loss" – The loss of a planting season or the irreparable harm of a crop.

(10) "Marginal Burn Day" – a day when limited amounts of agricultural burning, including prescribed burning, for individual projects in specific areas for limited times is not prohibited by the state board and burning is authorized by the District consistent with these Guidelines.

(11) "No-Burn Day" – Any day on which agricultural burning, including prescribed burning, is prohibited by the state board or the air district in which the burning will occur.

(12) "Open Outdoor Fire" – Any combustion (including detonation) of combustible material of any type outdoors in the open, not in any enclosure, where the products of combustion are not directed through a flue, except: any outdoor fire burned according to an existing District permit, blasting operations permitted by the California Occupational Safety and Health Administration, and detonation associated with military operations.

(13) "Permissive Burn Day" or "burn day" – Any day on which agricultural burning, including prescribed burning, is not prohibited by the state board and burning is authorized by the District consistent with these Guidelines.

(14) "Prescribed Burning" – The planned application of fire, including natural or accidental ignition, to vegetation to achieve any specific objective on lands selected in advance of that application.

(15) "Range Improvement Burning" – The use of Prescribed Burning to remove vegetation for a wildlife, game or livestock habitat, or for the initial establishment of an agricultural practice on previously uncultivated land.

(16) "Silviculture" – The establishment, development, care, and reproduction of stands of timber.

(17) "Smoke Management Plan" – A document prepared for each fire in accordance with the Smoke Management Program.

(18) "Smoke Management Program" – The most recent version of the program required by Title 17 of the California Code of Regulations §§80100-80330 and adopted by the APCO.

(19) "Timber Operations" – The cutting or removal of timber or other forest vegetation for the purpose of producing commercial forest products.

(20) "Tumbleweeds" – Russian thistle (*Salsola kali*).

(21) "Wildland Vegetation Management Burning" – The use of Prescribed Burning conducted by a public agency, or through a cooperative agreement or contract involving a public agency, to burn land predominantly covered with chaparral (as defined in Title 14, CCR, §1561.1), trees, grass, or standing brush.

(C) Requirements

(1) A person shall not conduct or allow open burning:

(a) Unless the Executive Officer has declared the day as a permissive burn day and such burning is not prohibited by a public fire protection agency; and

(b) Without first obtaining a written permit from the Executive Officer, unless the applicable fire protection agency has issued a permit for the burn; and

(c) Without first receiving authorization from the Executive Officer for each day for each open burning event.

(2) All burn projects greater than 10 acres in size or estimated to produce more than 1 ton of particulate matter shall be conducted in accordance with the provisions of the Smoke Management Program.

(3) Except as otherwise provided for in this Rule, no person shall set, permit, or use an Open Outdoor Fire for the purpose of disposal or burning of petroleum wastes; asbestos; treated wood; demolition or construction debris; residential rubbish; garbage or vegetation; tires; tar; trees; wood waste; or other combustible or flammable solid, liquid or gaseous waste; or for metal salvage or burning of motor vehicle bodies.

(4) A person shall not set or permit an Open Outdoor Fire for Agricultural Burning when prohibited by District Rule 701 or in any geographic area when CARB or the APCO (or the local fire protection agency, in the case of an existing burn permit) prohibits burning in that area due to adverse meteorological conditions (No-burn day), unless such burning is required to alleviate an Imminent and Substantial Economic Loss and the total area burned within the District on that day does not exceed 200 acres. Any such burning must be authorized in a special burn permit issued by the District and not by the designated agency.

(5) Upon request from a permittee through a designated agency, seven days in advance of a specific Prescribed Burn, a permissive-burn, marginal-burn, or no-burn forecast will be issued by CARB up to 48 hours prior to the date scheduled for the burn. Without further request, a daily forecast will continue to be issued until a permissive-burn or marginal-burn forecast is issued.

(6) CARB shall, for each geographic area, determine meteorological conditions which will cause Open Outdoor Fires to have an adverse effect on the ambient air quality in that area. A list of the geographic areas and specific meteorological conditions for each area shall be maintained at the District offices and shall be made available to the public. The APCO or the Designated Agency may use more restrictive meteorological criteria than designated in Title 17 §80311

(7) A person shall not burn or permit the burning of combustible material in an Open Outdoor Fire, except for Prescribed Burns done in accordance with an approved Smoke Management Plan, unless such combustible material:

(a) Is ignited as rapidly as practical using Approved Ignition Devices within applicable fire control restrictions;

(i) Field crops shall be ignited only by strip firing into the wind or by backfiring, except where crops are determined not to lend themselves to such ignition;

(b) Has been stacked or piled in such a manner as to promote drying and insure combustion with a minimum of smoke production, and has dried sufficiently to ensure rapid combustion (unless agricultural or Silvicultural practices dictate otherwise). Minimum drying times are:

(i) One week for wastes from field crops that are cut in green condition;
(ii) Zero days for dry cereals; or
(iii) Three weeks for prunings and small branches (less than two inches in diameter);
(iv) Six weeks for large branches and stumps (greater than two inches in diameter);
(v) One week for other materials.

(c) Is free of tires, oil filters, rubber, tar paper, plastics, shop wastes, asbestos, treated wood, demolition debris, construction debris and other rubbish, and is reasonably free of dirt, soil and visible surface moisture; and,

(d) Is burned during daylight hours, with no ignition prior to 6 a.m. and with all combustion extinguished within one hour of sunset.

(8) A person shall not set or permit an Open Outdoor Fire without first obtaining a written permit for such burning from the local fire protection agency, and such burning shall be conducted in accordance with that agency's fire laws and regulations. Such permit shall have form and content approved by the APCO, as required by District Rule 208. Such permit may be granted only for any of the following reasons:

(a) Where a fire hazard, to life or property, is declared by the local fire protection agency and such fire hazard cannot be abated by any other means;

(b) For Agricultural Burning;

(c) For disposal of Tumbleweeds (*Salsola kali*);

(d) For the burning of infectious waste other than hospital waste upon order of the County Health Officer to abate a public health hazard;

(e) For the burning of dry cotton gin waste or other diseased agricultural wastes infected with an agricultural pest hazardous to nearby agricultural operations and upon order of the County Agricultural Commissioner;

(9) An approved burn permit must be obtained from the AVAQMD in advance of any burning of brush cuttings resulting from brush clearance done in compliance with local ordinances to reduce fire hazard. It is required that the approved burning occur on the property where the brush cuttings originated.

(10) Land development burning for the purpose of disposing of wood waste from trees, vines, or bushes must occur on the property where the wood waste originated for the following reasons:

(a) If the Executive Officer finds it more desirable to dispose of such waste by burning than to dispose of it by other available means, such as, but not limited to, by removing it to sanitary fills;

(b) Such waste may only be burned on days during which agricultural burning is not prohibited;

(c) Obtain a District approved burn permit.

(11) Notwithstanding the provisions of section (C)(8), a person may burn or permit an Open Outdoor Fire for any of the following purposes, provided such fire is set by, or under the jurisdiction of, a designated fire agency having jurisdiction over the proposed burn location(s), the total area burned with Prescribed Burns within the District does not exceed 1,000 acres in any one day, and a valid burn permit has been issued, or a Smoke Management Plan has been approved, by the District.

(a) For the instruction of employees in the methods of fighting fires;

(b) For Forest Management, Range Improvement or Wildland Vegetation Management Burning, provided the fire is a Prescribed Burn performed in accordance with an approved Smoke Management Plan; and

(c) For research or filming purposes.

(D) Exemptions

(1) The requirements of this Rule shall not apply to:

(a) Backfires necessary to save life or valuable property pursuant to the Public Resources Code (§4426) set by, or under the jurisdiction of a fire protection agency, and the ignition devices used to set such backfires;

(b) Recreational fires, ceremonial fires, and cooking fires, where the combustible material is clean, dry wood or charcoal;

(2) The notification requirement given in Section (E)(2) shall not apply to instructional fires solely involving the combustion of propane or natural gas.

(3) The area limit in Section (C)(11) shall not apply if the following information is provided to the APCO for review and approval thirty (30) days in advance of the proposed Prescribed Burning:

(a) Location and specific objectives of the burning;

(b) Acreage, type, and arrangement of vegetation to be burned;

(c) Directions and distances to nearby sensitive receptor areas;

(d) Fuel condition, combustion, and meteorological prescription elements developed for the project;

(e) Projected schedule and duration of project ignition, combustion, and burn down;

(f) Specifications for monitoring and verifying of critical parameters;

(g) Specifications for disseminating project information; and

(h) Contingent suppression measures in case of public nuisance or exceedance of state or federal ambient air quality standard.

(E) Monitoring, Recordkeeping and Reporting

(1) The APCO shall receive a copy of any permit granted under Section (C)(8) within ninety (90) days of the issuance of such permit.

(2) The APCO shall be notified prior to burning conducted under the provisions of Section (C)(9), (C)(10), and (C)(11), by written means or a phone call received prior to the start of the burn.

[SIP: Submitted as amended 02/19/08 on mm/dd/yy; Submitted as amended 10/2/87 on 3/23/88; Approved 7/6/82, 47 FR 29231, 40 CFR 52.220(c)(104)(ii)(A); Disapproved, prior rules 57.1, 57.2, 57.3 and 57.4 retained 1/24/81, 46 FR 3883, 40 CFR 52.273(b)(7)(i); Approved 9/8/78, 43 FR 40011, 40 CFR 52.220(c)(39)(iii)(C)]

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(**Adopted:** 01/09/76; **Amended:** 09/03/76; **Amended:** 02/04/77; **Amended:** 11/18/77; **Amended:** 02/03/78; **Amended:** 01/05/79; **Amended:** 05/04/79; **Amended:** 12/07/79; **Amended:** 01/16/81; **Amended:** 10/15/82; **Amended:** 11/01/85; **Amended:** 03/04/88; **Amended:** 07/07/89; **Amended:** 09/08/95; **Amended:** 09/15/98; **Amended**: 10/21/08)

RULE 461
Gasoline Transfer and Dispensing

(A) General

(1) Purpose

(a) To reduce Volatile Organic Compounds (VOC) emissions from Gasoline Transfer and Dispensing.

(2) Applicability

(a) This rule applies to the transfer of Gasoline from any tank truck, trailer, or railroad tank car into any stationary storage tank or Mobile Fueler, and from any stationary storage tank or Mobile Fueler into any Mobile Fueler or Motor Vehicle fuel tank.

(B) Definitions

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

(1) Altered Gasoline Transfer and Dispensing Facility – A Gasoline Transfer and Dispensing Facility with any of the following:

(a) The removal or addition of storage tank(s), or changes in the number of Fueling Positions.

(b) The replacement of storage tank(s) or dispensing nozzle(s) with different characteristics or descriptions from those specified on the existing permit.

(2) Air Pollution Control Officer (APCO) – The person appointed to the position of Air Pollution Control Officer of the District pursuant to the provisions of California Health & Safety Code §40750, and his or her designee.

(3) Aspirator-assist System – A Phase II Vapor Recovery System that uses an aspirator to create a vacuum during Gasoline dispensing to capture Gasoline Vapors.

(4) Balance System – A Phase II Vapor Recovery System that operates on the principle of vapor displacement.

(5) Bellows-less Nozzle – Any nozzle that incorporates both an assist system and a Gasoline Vapor capture mechanism at the Motor Vehicle filler neck, such that vapors are collected at the vehicle filler neck without the need for an interfacing flexible bellows, and which is certified by the California Air Resources Board (CARB) for operation as a Bellows-less Nozzle.

(6) California Air Resources Board (CARB) – The California State Air Resources Board, the powers and duties of which are described in Part 2 of Division 26 of the California Health and Safety Code (commencing with §39500).

(7) "CARB Certified" Vapor Recovery System – A Phase I or Phase II Vapor Recovery System, equipment, or any component thereof, for which CARB has evaluated its performance and issued a valid Executive Order pursuant to Health and Safety Code Section 41954.

(8) CARB Executive Orders – Orders published by CARB that document the requirements of specific vapor control equipment and procedures used in Phase I and Phase II Vapor Recovery Systems.

(9) Coaxial Hose – A hose that contains two passages with a configuration of a hose within a hose. One of the passages dispenses the liquid Gasoline into the vehicle fuel tank while the other passage carries the Gasoline Vapors from the vehicle fuel tank to the storage tank.

(10) District – The Antelope Valley Air Pollution Control District the geographical area of which is described in District Rule 103.

(11) Enhanced Vapor Recovery (EVR) – Performance standards and specifications set forth in the CARB CP 201 (Certification Procedure for Vapor Recovery Systems at Gasoline dispensing facilities) Sections 3 through 9.

(12) Fueling Position – A fuel dispensing unit consisting of nozzle(s) and meter(s) with the capability to deliver only one fuel product at one time.

(13) Gasoline – Any petroleum distillate or petroleum distillate/alcohol blend having a true vapor pressure greater than 200 mm Hg (3.9 psi) and less than 760 mm Hg (14.7 psi) at 100 degrees F as determined by ASTM Method D323-89.

(14) Gasoline Transfer and Dispensing Facility – A mobile system, including Mobile Fuelers, or a stationary facility consisting of one or more storage tanks and associated equipment which receive, store, and dispense Gasoline subject to the provisions of this rule.

(15) Gasoline Vapors – The organic compounds in vapor form displaced during Gasoline transfer and dispensing operations, and includes entrained liquid Gasoline.

(16) Insertion Interlock Mechanism – Any "CARB Certified" mechanism that ensures a tight fit at the nozzle fill pipe interface and prohibits the dispensing of Gasoline unless the bellows is compressed.

(17) Liquid Removal Device – A device designed specifically to remove trapped liquid from the vapor passages of a Coaxial Hose.

(18) Liquid-tight – A liquid leak rate not exceeding three drops per minute.

(19) Mobile Fueler – Any tank truck or trailer that is used to transport and dispense Gasoline from an onboard storage tank into any Motor Vehicle fuel tank.

(20) Motor Vehicle – Any self-propelled vehicle as defined in Section 415 of the California Vehicle Code.

(21) Onboard Refueling Vapor Recovery (ORVR) – Vehicle emission control system that captures fuel vapors from the vehicle gas tank during refueling.

(22) Owner/operator – Any person who owns, leases, or operates a Gasoline Transfer and Dispensing Facility.

(23) Poppetted Dry Break – A Phase I Vapor recovery device that opens only by connection to a mating device to ensure that no Gasoline Vapors escape from the underground storage tank before the vapor return line is connected.

(24) Pressure/vacuum Relief Valve – A valve that is installed on the vent pipes of the Gasoline storage tanks to relieve pressure or vacuum build-up at preset values of pressure or vacuum.

(25) Rebuild – An action that repairs, replaces, or reconstructs any part of a component of a vapor recovery system that forms the gasoline vapor passage of the component, or that comes in contact with the recovered gasoline vapors in the component. Rebuild does not include the replacement of a complete component with another CARB certified complete component; nor does it include the replacement of a spout, bellows, or vapor guard of a CARB certified nozzle. The new part shall be CARB certified and as supplied by the qualified manufacturer specifically for the CARB certified nozzle.

(26) Retail Gasoline Transfer and Dispensing Facility – Any Gasoline Transfer and Dispensing Facility subject to the payment of California sales tax for the sale of Gasoline to the public.

(27) Spill Box – An enclosed container around a Phase I fill pipe that is designed to collect Gasoline spillage resulting from disconnection between the liquid Gasoline delivery hose and the fill pipe.

(28) Submerged Fill Tube – Any fill tube the discharge opening of which is entirely submerged, when the liquid level above the bottom of the tank is:

(a) 15.2 cm (6 inches), for tanks filled from the top, or

(b) 45.7 cm (18 inches) for tanks filled from the side.

(29) Unites States Environmental Protection Agency (USEPA) – The United States Environmental Protection Agency, the Administrator of the USEPA and his or her authorized representative.

(30) Vacuum-assist System – A Phase II Vapor Recovery System that uses vacuum-producing device such as a compressor or turbine to create a vacuum during Gasoline dispensing to capture Gasoline Vapors.

(31) Vapor Check Valve – A valve that opens and closes the vapor passage to the storage tank to prevent Gasoline Vapors from escaping when the nozzle is not in use.

(32) Vapor-tight – The detection of less than 10,000 ppm hydrocarbon concentration, as determined by EPA Method 21, using an appropriate analyzer calibrated with methane.

(33) Volatile Organic Compound (VOC) – Any volatile compound containing the element carbon, excluding methane, carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates, ammonium carbonate, and exempt compounds as listed in 40 CFR 51.100(s)(1).

(C) Requirements

(1) Gasoline Transfer Into Stationary Storage Tanks and Mobile Fuelers (Phase I)

A person shall not transfer, permit the transfer or provide equipment for the transfer of Gasoline from any tank truck, trailer or railroad tank car into any stationary storage tank with a capacity of 950 liters (251 gallons) or more, or any Mobile Fueler tank of greater than 454 liters (120 gallons) capacity unless all of the following conditions are met:

(a) Such stationary storage tank or Mobile Fueler tank is equipped with a "CARB Certified" Submerged Fill Tube;

(b) Such stationary storage tank or Mobile Fueler tank is equipped with a "CARB Certified" Vapor Recovery System, which is maintained and operated according to the manufacturer's specifications;

(c) All vapor return lines are connected between the tank truck, trailer or railroad tank car, and the stationary storage tank or Mobile Fueler. In addition, all associated hoses, fittings, and couplings are maintained in a Liquid-tight and Vapor-tight condition, as defined under subsection (B)(18) and (B)(32);

(d) The hatch on any tank truck, trailer, or railroad tank car shall not be opened for more than three (3) minutes for each visual inspection, provided that:

(i) Transfer or pumping has been stopped for at least three (3) minutes prior to opening; and

(ii) The hatch is closed before transfer or pumping is resumed.

(e) Underground tank lines are gravity drained, and above-ground tanks are equipped with dry breaks, or as approved by the District, such that upon line disconnect the liquid leak rate does not exceed three (3) drops per minute;

(f) Equipment subject to this subsection is operated and maintained, according to all of the following requirements:

(i) All fill tubes are equipped with Vapor-tight covers, including gaskets;

(ii) All dry breaks are equipped with Vapor-tight seals and dust covers;

(iii) Fixed or Spring-Loaded coaxial fill tubes are operated so that the vapor passage from the stationary storage tank or the Mobile Fueler back to the tank truck, trailer, or railroad tank car is not obstructed;

(iv) The fill tube assembly, including fill tube, fittings and gaskets, is maintained to prevent vapor leakage from any portion of the Vapor Recovery System; and

(v) All stationary storage tank or the Mobile Fueler vapor return lines without dry breaks are equipped with Vapor-tight covers, including gaskets.

(g) Any time an underground stationary storage tank is installed or replaced at any Gasoline Transfer and Dispensing Facility, a "CARB Certified" Spill Box shall be installed;

(h) A person shall not install or permit the installation of any Phase I Vapor Recovery System of the coaxial design at any Gasoline Transfer and Dispensing Facility unless such system was certified by CARB after January 1, 1994; and

(i) A person shall not install or permit the installation of any Phase I Vapor Recovery System of the dual-point design at any Gasoline Transfer and Dispensing Facility unless such system incorporates "CARB Certified" Poppetted Dry Breaks or spring-loaded Vapor Check Valves on the vapor return coupler.

(2) Gasoline Transfer Into Vehicle Fuel Tanks (Phase II)

A person shall not transfer, or permit the transfer, or provide equipment for the transfer of Gasoline from a stationary storage tank or a Mobile Fueler of greater than 454 liters (120 gallons) capacity into any Mobile Fueler of greater than 454 liters (120 gallons) capacity or any Motor Vehicle fuel tank of greater than 19 liters (5 gallons) capacity unless all of the following conditions are met:

(a) The dispensing unit used to transfer the Gasoline from the stationary storage tank or Mobile Fueler to the Mobile Fueler or Motor Vehicle fuel tank is equipped with a "CARB Certified" Vapor Recovery System;

(b) The Vapor Recovery System and associated components are operated and maintained in a Vapor-tight and Liquid-tight manner in accordance with the manufacturer's specifications and the applicable CARB certification;

(c) Equipment subject to this rule is operated and maintained with none of the defects listed in California Code of Regulations, Section 94006, Subchapter 8, Chapter 1, Part III of Title 17, as specified in the most recently adopted CARB “Vapor Recovery Equipment Defects List” (http://www.arb.ca.gov/vapor/title17/title17.htm);

(d) A person shall not install or permit the installation of any Balance System bellows-equipped nozzle at any Gasoline Transfer and Dispensing Facility unless the nozzle is equipped with a "CARB Certified" Insertion Interlock Mechanism;

(e) A person shall not install or permit the installation of any Balance System nozzle at a new or Altered Gasoline Transfer and Dispensing Facility unless a Vapor Check Valve is located in the nozzle. In addition, effective January 1, 1997, a person shall not operate or permit the operation of any Balance System nozzle unless a Vapor Check Valve is located in the nozzle;

(f) A person shall not install or permit the installation of any nozzle at a new or Altered Gasoline Transfer and Dispensing Facility unless the nozzle is equipped with a Coaxial Hose. In addition, effective January 1, 1998, a person shall not operate any Gasoline-dispensing nozzle unless the nozzle is equipped with a Coaxial Hose;

(g) Unless otherwise specified in the applicable CARB Executive Orders, the inside diameter of the connection between the riser and dispenser cabinet at a new or Altered Gasoline Transfer and Dispensing Facility shall not be less than 0.75 inch. If a flexible tubing is used for this connection, the material shall be appropriate for use with Gasoline and shall be equipped with a clearly visible bonding strap;

(h) Unless otherwise specified in the applicable CARB Executive Orders, all Liquid Removal Devices installed for any Gasoline-dispensing nozzle with a dispensing rate of greater than five gallons per minute shall be "CARB Certified" with a minimum liquid removal rate of five milliliters per gallon transferred; and

(i) The breakaway coupling shall be CARB certified. Any breakaway coupling shall be equipped with a poppet valve, which shall close and maintain both the gasoline vapor and liquid lines vapor tight and liquid tight when the coupling is separated. In the event of a separation due to a “drive-off”, the owner/operator shall complete one of the following and document the activities pursuant to paragraph (C)(5)(e) recordkeeping requirements:

(i) Conduct a visual inspection of the affected equipment and perform qualified repairs on any damaged components before placing any affected equipment back in service. In addition, the applicable re-verification tests pursuant to section (D), or equivalent test methods as approved in writing by the Executive Officer and CARB, shall be conducted and successfully passed prior to the affected equipment dispensing gasoline into any vehicle; or

(ii) Conduct a visual inspection of the affected equipment and replace the affected nozzles, coaxial hoses, breakaway couplings, and any other damaged components with new or certified rebuilt components that are CARB certified, before placing any affected equipment back in service.

(3) Additional Requirements

(a) A person shall not supply, offer for sale, sell, install or allow the installation of any Vapor Recovery System or any of its components, unless the system and component are "CARB certified." Each Vapor Recovery System and its components shall be clearly and permanently

marked with the qualified manufacturer's name and model number as certified by CARB. In addition, the qualified manufacturer's unique serial number for each component shall also be clearly and permanently marked for the dispensing nozzles. Any qualified manufacturer who rebuilds a component shall also clearly and permanently mark the corresponding information on the component.

(b) A person shall not perform or permit the "pump-out" (bulk transfer) of Gasoline from a storage tank subject to subsection (C)(1); unless such bulk transfer is performed using a vapor collection and transfer system capable of returning the displaced vapors to the stationary storage tank.

(c) A person shall not store, or allow the storage of, Gasoline in any stationary storage tank with a capacity of 950 liters (251 gallons) or more unless such tank:

(i) Complies with Rule 463(a); or
(ii) Is equipped with a Phase I Vapor Recovery System.

(d) The Owner/operator of any Gasoline Transfer and Dispensing Facility shall conspicuously post District-required signs specified in Attachment A of this rule in the immediate Gasoline dispensing area.

(e) A dispenser that is not intended to be used to fuel Motor Vehicles shall have sign posted on it to that effect.

(f) A person shall not store, or allow the storage of, gasoline in any stationary storage tank with a capacity of 950 liters (251 gallons) or more, or any mobile fueler with a capacity of 454 liters (120 gallons) or more, unless the vent pipe of the tank complies with all of the following:

(i) The vent pipe opening is equipped with a "CARB certified" pressure-vacuum relief valve.
(ii) The vent pipe opening for a stationary storage tank is at least 12 feet above the driveway level used for tank truck filling operations.
(iii) Unless otherwise specified in the applicable CARB Executive Orders, the pressure-vacuum relief valve for an underground storage tank vent shall be set for pressure relief at 2.5 to 6.0 inches water column and vacuum relief at 6.0 to 10.0 inches water column. The valves for vents on aboveground tanks and mobile fuelers shall meet the applicable CARB certified specifications.
(iv) Pressure-vacuum relief valves for stationary storage tanks, as supplied and installed, shall be color-coded or otherwise clearly marked to identify the pressure-vacuum setting. The valves shall be installed on the vent pipe(s) such that the color codes or marks shall be legible to ground-level observers.
(v) For the purpose of this requirement, vent pipes of gasoline storage

tanks may be manifolded to a single valve when the stationary storage tanks are manifolded according to the applicable CARB Executive Order.

(g) Gasoline shall not be stored in open container(s) of any size or handled in any manner (spillage, spraying, etc.) that permits Gasoline or Gasoline Vapors to enter the atmosphere, contaminate the ground, or the sewer.

(h) The failure of an Owner/operator of any Gasoline Transfer and Dispensing Facility to meet any requirements of section (C) of this rule shall constitute a violation. Such non-compliant equipment shall be tagged "Out of Order."

(i) Except during repair activity, the "Out of Order" tag specified in subsection (C)(3)(h) shall not be removed and the non-compliant equipment shall not be used, permitted to be used, or provided for use unless all of the following conditions are satisfied:

(i) The non-compliant equipment has been repaired, replaced, or adjusted, as necessary;
(ii) The Owner/operator has notified the District of the repairs by completing, signing and submitting the form supplied by the District; and,
(iii) The non-compliant equipment has been reinspected and/or authorized for use by the District.

(j) The Owner/operator of a new or Altered Gasoline Transfer and Dispensing Facility shall have all underground storage tank installation and associated piping configuration inspected prior to any backfilling to verify that all underground equipment is properly installed in accordance with the requirements specified in the applicable CARB Executive Order. The District shall be notified by telephone at least 24 hours prior to the backfilling.

(k) The Owner/operator of a new or Altered Gasoline Transfer and Dispensing Facility shall have all Phase I and Phase II Vapor Recovery Systems inspected upon completion of the construction to verify that all components were installed in accordance with the description specified in the Authority to Construct and in compliance with all District requirements. The District shall be notified in writing of any changes to the information and specifications submitted with the application under which the Authority to Construct was issued.

(4) Self-Compliance Program Requirements

The Owner/operator of any Retail Gasoline Transfer and Dispensing Facility shall implement a self-compliance program as follows:

(a) The self-compliance program shall include the following elements:

(i) Weekly maintenance inspections shall be conducted in accordance with the protocol specified in Attachment B to ensure proper operating conditions of all components of the Vapor Recovery Systems.

(ii) Periodic compliance inspections shall be conducted at least once every twelve months and in accordance with the protocol specified in Attachment C to verify the compliance with all applicable District rules and regulations, as well as all permit conditions.

(iii) Maintenance schedules consistent with the applicable Phase I and Phase II Vapor Recovery Systems and components installed at the Gasoline transfer and dispensing facility.

(iv) An employee training program including the following:

a. Itemized training procedures for employees responsible for conducting any part of the self-compliance program.

b. A training schedule to periodically train any employee responsible for conducting any part of the self-compliance program.

c. A record for each employee of the dates of training provided and the next training date.

d. A procedure to review and establish any additional necessary training following any changes or updates to the CARB Executive Order for the installed Vapor Recovery System.

(b) Any equipment with major defect(s) which are identified during the weekly maintenance inspections or periodic compliance inspections shall be removed from service, repaired, brought into compliance, and duly entered into the repair logs required under subsection (C)(5)(e) before being returned to service.

(c) Defects discovered during self inspection and repair shall not constitute a violation of Rule 461.

(5) Testing, Reporting and Recordkeeping Requirements

(a) Within 90 calendar days or after dispensing the first 60,000 gallons of fuel into a Mobile Fueler or a vehicle fuel tank, the Owner/operator of a new or Altered Gasoline Transfer and Dispensing Facility shall conduct and successfully pass the performance tests in accordance with the test methods specified in section (D), and any additional tests required by the applicable CARB Executive Orders and District Permits, to verify the proper installation and operation of Phase I and Phase II Vapor Recovery Systems. Test results shall be submitted as stated in subsections (C)(5)(c)(iv) and (C)(5)(c)(v).

(b) The Owner/operator shall conduct and successfully pass the re-verification tests in accordance with the test methods specified in section (D), and any additional tests required by the applicable CARB Executive Orders or District Permits, to verify the proper operation of the Vapor Recovery Systems. Test results shall be submitted as stated in subsections (C)(5)(c)(iv) and (C)(5)(c)(v).

(i) The re-verification tests at Retail Gasoline Transfer and Dispensing Facilities shall be conducted annually.

(ii) The Owner/operator of a non-retail Gasoline Transfer and Dispensing Facility shall complete the re-verification tests annually.

(iii) Once a facility re-verification testing month(s) are established, subsequent re-verification testing shall be conducted during the same months each year. When a new performance test schedule is required due to a facility alteration, new re-verification testing months shall be established based on the date of the performance tests.

(iv) In case of a change of operator, the new operator shall conduct the next re-verification test on the same testing month as established by the previous operator, if the previous re-verification testing records are available. When no testing records are available, the new operator shall complete all the applicable re-verification testing within 90 calendar days of the change of operator.

(c) A person who conducts performance or re-verification tests shall comply with all of the following:

(i) Conduct performance or re-verification tests in accordance with the applicable test methods listed in section (D) and other CARB testing procedures. Tests shall be conducted using calibrated equipment meeting the calibration range and calibration intervals specified by the manufacturer.

(ii) Notify the District at least ten calendar days prior to testing. In the event that a performance test or re-verification test cannot be conducted at the scheduled date and time, the test may be re-scheduled to a later date and time provided that the District is notified at least 24 hours prior to the originally scheduled time. All notification under this subsection shall be provided by District approved methods.

(iii) Conduct performance and re-verification tests during normal District business hours. The APCO may approve alternative testing.

(iv) Submit a copy of the PASS/FAIL test results in a District approved format to the APCO within 30 calendar days after each test is

conducted. The PASS/FAIL test results are a summary of the overall results of each test.

(v) Submit the final test report demonstrating compliance within 30 calendar days of the date when all tests were passed. The test report shall include all the required records of all tests performed, test data, current AVAQMD facility ID number of the location being tested, the equipment Permit to Operate or Application number and, a statement whether the system or component tested meets the required standards.

(d) The Owner/operator shall not operate or resume operation of a Gasoline transfer and dispensing facility, unless the facility has successfully passed the applicable performance or re-verification tests. Notwithstanding the above, when a dispenser associated with any equipment that has failed a re-verification test is isolated and shut down, the Owner/operator may continue operation or resume operation of the remaining equipment at the facility, provided that test results demonstrate that the remaining equipment is in good operating condition. All test results and the method of isolating the defective equipment shall be documented in the test reports to be submitted to the APCO pursuant to subsection (C)(5)(e)(iii), (C)(5)(c)(iv) and (C)(5)(c)(v).

(e) Recordkeeping

A person who performs the installation of components, self-compliance inspections, repairs or testing at any Gasoline Transfer and Dispensing Facility, including, but not limited to, the activities for normal operation and maintenance, performance testing, re-verification testing and those following a drive-off, shall provide to the Owner/operator all records listed below, as applicable, at the end of each day when the service is provided. The Owner/operator of any Retail or non-retail Gasoline Dispensing Facility shall maintain all records listed below and any other test results or maintenance records that are required to demonstrate compliance on site for a period of at least two (2) years (or five (5) years for Title V facilities). Notwithstanding, records for non-retail Gasoline Dispensing Facilities that are unmanned may be kept at other locations approved by the APCO. All records shall be made available to the APCO upon request both on site during inspections and offsite as specified.

(i) Records of all components installed, defective components identified or repaired during self-compliance inspections.

(ii) Repair logs, which shall include:

a. Date and time of each repair.

b. The name of the person(s) who performed the repair, and, if applicable, the name, address and phone number of the person's employer.

c. Description of service performed.
d. Each component that was installed, repaired, serviced, or removed, including the required component identification information pursuant to subsection (C)(3)(a).
e. Each component that was installed as replacement, if applicable, including the required component identification information pursuant to subsection (C)(3)(a).
f. Receipts for parts used in the repair and, if applicable, work orders, which shall include the name and signature of the person responsible for performing the repairs.

(iii) Records of tests, which shall include:
a. Date and time of each test.
b. Name, affiliation, address and phone number of the person(s) who performed the test.
c. Test data and calibration data for all equipment used.
d. Date and time each test is completed and the facility Owner/operator is notified of the results. For a test that fails, a description of the reasons for the test failure shall also be included.
e. For a re-test following a failed performance or re-verification test, description of repairs performed pursuant to subsection (C)(5)(e)(i) and (C)(5)(e)(ii).
f. Copies of test reports in District approved format.

(iv) Monthly Gasoline throughput records.

(v) Records to prove that the installer/contractor that installed or altered the Enhanced Vapor Recovery (EVR) equipment has successfully completed a manufacturer training program and any relevant state certification program applicable to the Phase I and Phase II Enhanced Vapor Recovery systems and associated components as specified in subsection (C)(3)(a).

(f) Recordkeeping for Exempt Fleets

An Owner/operator claiming exemption under Section (E)(4) shall keep a record of the make , model, model year, and vehicle identification number of all vehicles refueled at the Gasoline dispensing facility. These records shall be maintained on the premises for at least two (2) calendar years.

(D) Performance and Re-verification Test Methods

All test methods referenced in this subsection shall be the most recently CARB approved version or as stated in the applicable CARB Executive Orders.

(1) The static pressure performance of a Phase I or Phase II Vapor Recovery System for underground and aboveground tanks shall be determined by the CARB Test Procedure TP-201.3 and TP-201.3B, as applicable.

(2) The dynamic pressure performance of a Phase II Vapor Recovery System shall be determined by the CARB Test Procedure TP-201.4.

(3) The air-to-liquid volume ratio of a Phase II Vapor Recovery System shall be determined by the CARB Test Procedure TP-201.5.

(4) The liquid removal rate of a Phase II Vapor Recovery System shall be determined by the CARB Test Procedure TP-201.6.

(5) The manifold of the underground storage tanks shall meet CARB tank tie test requirements pursuant to TP-201.3C.

(6) The static torque of rotatable adaptors for a Phase I Enhanced Vapor Recovery system shall be determined by the CARB Test Procedure TP-201.1B.

(7) The applicable tests for the drop tube, drain valve assembly, and overfill prevention device are the following:

(a) The leak rate of the drop tube/drain valve assembly for a Phase I Enhanced Vapor Recovery system shall be determined by the CARB Test Procedure TP-201.1C.

(b) The leak rate of the drop tube overfill protection device and spill container drain valve for a Phase I Enhanced Vapor Recovery system shall be determined by the CARB Test Procedure TP-201.1D.

(8) The leak rate and cracking pressure of pressure/vacuum vent valves for a Phase I Enhanced Vapor Recovery system shall be determined by the CARB Test Procedure TP-201.1E.

(9) Any other test methods approved by the USEPA, CARB, and the District for underground tanks, aboveground tanks, and Mobile Fuelers.

(E) Exemptions

The provisions of this Rule shall not apply to the transfer of Gasoline:

(1) Into or from any stationary storage tank or Mobile Fueler if 75 percent or more of its monthly throughput is used for the fueling of implements of husbandry, such as vehicles defined in Division 16 (Section 36000, et seq.) of the California Vehicle Code, provided such a tank is equipped with a Submerged Fill Tube.

(2) Into or from any stationary storage tank or Mobile Fueler used exclusively for fueling agricultural wind machines.

(3) From any Mobile Fueler of greater than 454 liters (120 gallons) into any Motor

Vehicle fuel tank of greater than 19 liters (5 gallons) capacity until 12 months following the general commercial availability of an applicable vapor recovery design suitable to the Mobile Fueler's Gasoline transfer and storage equipment and certification of such a system by CARB.

(4) The requirements of (C)(2) shall not apply to dedicated, non-public accessible, fuel dispensing equipment serving vehicle fleets where 95 percent of the fleet vehicles are equipped with Onboard Refueling Vapor Recovery (ORVR) systems. To qualify for this exemption, the fleet operator must also own the Gasoline Transfer and Dispensing operation that services the vehicle fleet.

(a) Prior to operating under the exemption in Section (E)(4), operator shall obtain a valid Authority to Construct or Permit to Operate allowing such operations.

[SIP: Submitted as amended mm/dd/yy on _____; Disapproved 6/21/01, 66 FR 33177, 40 CFR 52.269(b)(3)(ii)(a) Prior version dated 1/3/96 retained; Approved 10/7/96, 61 FR 52297, 40 CFR 52.220(c)(229)(i)(A)(1); Approved 8/17/94, 59 FR 42165, 40 CFR 52.220(c) (182)(i)(A)(4); Approved 5/3/84, 49 FR 18829, 40 CFR 52.220(c)(127)(vii)(B); Approved 7/8/82, 47 FR 2968, 40 CFR 52.220(c)(95)(iv)(A); Approved _____, _____, 40 CFR 52.220(c)(66)(i)(A); Approved _____, _____, 40 CFR 52.220(c)(45)(iii)(A); Disapproved prior version of 4/21/76 retained 9/8/78, 43 FR 40011, 40 CFR 52.220(c)(39)(iii)(A), 40 CFR 52.220(c)(39)(vi)(B) and 40 CFR 52.229(b)(2)(i); Approved 7/26/77, 42 FR 37976, 40 CFR 52.220(c)(31)(vi)(A) and 40 CFR 52.220(c)(35)(ii)(A)]

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ATTACHMENT A

AVAQMD-REQUIRED SIGNS

(A) The operator shall post the following signs:

(1) "NOZZLE" operating instructions;

(2) Antelope Valley AQMD" toll-free telephone number; and

(3) A "warning" stating:

"TOXIC RISK - FOR YOUR OWN PROTECTION
DO NOT BREATHE FUMES
DO NOT TOP TANKS"

(B) All required signs shall conform to all of the following:

(1) For decal signs:

(a) Each sign shall be visible from all Fueling Positions it serves; and

(b) Sign shall be readable from a distance of 3 feet.

(2) All other signs:

(a) For pump toppers, one double-back sign per island;

(b) For permanent (non-decal) signs, two single-sided or one double-sided sign(s) per two (2) dispensers; and

(c) All signs shall be readable from a distance of 6 feet.

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ATTACHMENT B

WEEKLY MAINTENANCE INSPECTION PROTOCOL

The Owner/operator of a Retail Gasoline Transfer and Dispensing Facility shall at minimum verify the following during the weekly maintenance inspections:

(A) PHASE I VAPOR RECOVERY SYSTEM INSPECTION

(1) The spill container is clean and does not contain Gasoline. The spill containment drain valve shall be Vapor-tight.

(2) The fill caps are not missing, damaged or loose.

(3) If applicable:

(a) The spring-loaded Submerged Fill Tube seals properly against the coaxial fitting.

(b) The dry break (poppet valve) is not missing or damaged.

(4) The Submerged Fill Tube is not missing or damaged.

(B) PHASE II VAPOR RECOVERY SYSTEM INSPECTION

(1) The fueling instructions are clearly displayed with the appropriate toll-free complaint phone number and toxic warning signs.

(2) The following nozzle components are in place and in good condition, as specified in CARB Executive Orders:

(a) faceplate/facecone; vapor splash guard/fill guard/efficiency compliance device (ECD)/VEG

(b) bellows

(c) latching device spring

(d) Vapor Check Valve

(e) spout (proper diameter/vapor collection holes)

(f) Insertion Interlock Mechanism

(g) automatic shut-off mechanism

(h) hold open latch

(3) The hoses are not torn, flattened or crimped.

(4) For Vacuum-assist Systems, the vapor processing unit and burner are functioning properly.

(C) RECORDS OF DEFECTIVE COMPONENTS

ATTACHMENT C

PERIODIC COMPLIANCE INSPECTION PROTOCOL

The Owner/operator of a Retail Gasoline Transfer and Dispensing Facility shall at minimum verify the following during the periodic compliance inspections:

(A) GENERAL INSPECTION

(1) The District permit is current.

(2) The equipment and District permit description match.

(3) The facility complies with all permit conditions.

(4) The required sign is properly posted and the sign contains all the necessary information (i.e., toll-free complaint phone number, toxic warning sign, etc.).

(B) PHASE I VAPOR RECOVERY SYSTEM INSPECTION

(1) The spill container is clean and does not contain Gasoline.

(2) The fill caps are not missing, damaged or loose.

(3) If applicable:

(a) The spring-loaded Submerged Fill Tube seals properly against the coaxial fitting.

(b) The dry break (poppet valve) is not missing or damaged.

(4) The Submerged Fill Tube is not missing or damaged.

(5) The distance between the highest level of the discharge opening of the Submerged Fill Tube and the bottom of the stationary storage tank does not exceed six inches (6").

(6) The Phase I Vapor Recovery System complies with required CARB certification and is properly installed.

(7) The Spill Box complies with required CARB certification and is properly installed.

(8) The vent pipes are equipped with required Pressure/vacuum Relief Valves.

(C) PHASE II VAPOR RECOVERY SYSTEM INSPECTION

(1) The fueling instructions are clearly displayed.

(2) Each nozzle is the current CARB-certified model.

(3) Each nozzle is installed in accordance with the applicable CARB Executive Orders.

(4) The following nozzle components are in place and in good condition, as specified in CARB Executive Orders or California Code of Regulations, Title 17, Part III, Chapter 1, subchapter 8, section 94006 or Health and Safety Code Section 41960.2 (e):

(a) faceplate/facecone; vapor splash guard/fill guard/efficiency compliance device (ECD)

(b) bellows

(c) latching device spring

(d) Vapor Check Valve

(e) spout (proper diameter/vapor collection holes)

(f) Insertion Interlock Mechanism

(g) automatic shut-off mechanism

(h) hold open latch

(5) The hoses are not torn, flattened or crimped.

(6) The vapor recovery hoses are the required size and length.

(7) The hoses with retractors are adjusted to maintain a proper loop, and the bottom of the loop is within the distance from the island surface certified by the CARB Executive Order for that particular dispenser configuration.

(8) The vapor recovery nozzles are equipped with required hoses.

(9) The bellows-equipped vapor recovery nozzles are equipped with "CARB Certified" Insertion Interlock Mechanisms.

(10) If required, the flow limiter is not missing and is installed properly.

(11) The swivels are not missing, defective, or leaking, and the dispenser-end swivels, if applicable, are Fire-Marshall approved with 90-degree stops.

(12) If required, the Liquid Removal Devices comply with required CARB certifications and are properly installed.

(13) For Bellows-less Nozzles, the hoses are inverted coaxial type except for Hirt systems, and the vapor collection holes are not obstructed.

(14) For Vacuum-assist Systems, the vapor processing unit and burner are functioning properly.

(15) For Aspirator-assist Systems, the major components (i.e. aspirator or jet pump, modulating valve, and Vapor Check Valve) are present inside each dispenser. For Aspirator-assist Systems with certification-required calibration stickers, the current calibration sticker is present.

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ANTELOPE VALLEY AIR POLLUTION CONTROL DISTRICT

RULE 462
Organic Liquid Loading

(Adopted: 01/09/76; Amended: 05/05/78;Amended: 10/14/79;
Amended: 04/04/86; Amended: 12/07/90; Amended: 06/09/95)

(a) Purpose

This rule is intended to control emissions of volatile organic compounds (VOC) from facilities that load organic liquids with a vapor pressure of 1.5 psia (77.5 mm Hg) or greater under actual loading conditions into any tank truck, trailer, or railroad tank car.

(b) Definitions

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

1. BACKGROUND is the ambient concentration of organic vapors in the air measured according to the EPA Method 21 subsection 4.3.2.
2. CLASS "A" FACILITY is any facility which loads 20,000 gallons (75,700 liters) or more on any one day of organic liquids into any tank truck, trailer, or railroad tank car.
3. CLASS "B" FACILITY is any facility:
   A. which was constructed before January 9, 1976 and loads more than 4,000 gallons (15,140 liters) but not more than 20,000 gallons (75,700 liters) of gasoline on any one day into any tank truck, trailer, or railroad tank car.
   B. which was constructed before January 9, 1976 and loads not more than 4,000 gallons (15,140 liters) of gasoline on any one day, but more than 500,000 gallons (1,892,500 liters) of gasoline in any one calendar year, into any tank truck, trailer, or railroad tank car.
   C. which was constructed after January 9, 1976 and loads not more than 20,000 gallons (75,700 liters) of gasoline on any one day into a tank truck, trailer or railroad tank car.
4. CLASS "C" FACILITY is any facility existing before January 9, 1976 which loads not more than 4,000 gallons (15,140 liters) of gasoline on any one day and not more than 500,000 gallons in any one calendar year, into any tank truck, trailer, or railroad tank car.
5. EXEMPT COMPOUNDS are any of the following compounds that have been determined to be non-precursors of ozone:
   A. Group I (General)
      trifluoromethane (HFC-23)
      pentafluoroethane (HFC-125)
      1,1,2,2-tetrafluoroethane (HFC-134)
      tetrafluoroethane (HFC-134a)
      1,1,1-trifluoroethane (HFC-143a)
      1,1-difluoroethane (HFC-152a)
      chlorodifluoromethane (HCFC-22)
      dichlorotrifluoroethane (HCFC-123)
      2-chloro-1,1,1,2-tetrafluoroethane (HCFC-124)
      dichlorofluoroethane (HCFC-141b)
      chlorodifluoroethane (HCFC-142b)
      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
      sulfur-containing perfluorocarbons with no unsaturations and with sulfur bonds only to carbon and fluorine

   B. Group II
      methylene chloride

1,1,1-trichloroethane (methyl chloroform)
trifluoromethane (FC-23)
trichlorotrifluoroethane (CFC-113)
dichlorodifluoromethane (CFC-12)
trichlorofluoromethane (CFC-11)
dichlorotetrafluoroethane (CFC-114)
chloropentafluoroethane (CFC-115)
The use of Group II compounds and/or carbon tetrachloride may be restricted in the future because they are toxic, potentially toxic, or upper atmospheric ozone depleters, or cause other environmental impacts. By January 1, 1996, chlorofluorocarbons (CFC), 1,1,1-trichloroethane (methyl chloroform), and carbon tetrachloride will be phased out in accordance with the Code of Federal Regulations Title 40, Part 82 (December 10, 1993).

6. FACILITY is an organic liquid or gasoline loading rack or set of such racks that load organic liquid or gasoline into tanks, trailers or railroad cars, which are located on one or more contiguous properties within the District, in actual physical contact or separated solely by a public roadway or other public right-of-way, and are owned or operated by the same person or persons under common control.
7. FACILITY VAPOR LEAK is an escape of organic vapors from a source other than a tank truck, trailer or railroad tank car in excess of 3,000 ppm as methane above background when measured at a distance of 2 centimeters from the source according to EPA Method 21. A facility vapor leak source does not include liquid spillage or condensate resulting from "liquid leaks".
8. GASOLINE is any petroleum distillate or petroleum distillate/alcohol blend or alcohol, except any liquefied petroleum gas (LPG), which has a vapor pressure of 1.5 psia (77.5 mm Hg) or greater under actual loading conditions and is used as a fuel for internal combustion engines.
9. LIQUID LEAK is a dripping of liquid organic compounds at a rate in excess of three drops per minute from any single leak source other than the liquid fill line and vapor line of disconnect operations.
10. LIQUID LEAK FROM DISCONNECT OPERATIONS is defined as: (a) more than two milliliters of liquid drainage per disconnect from a top loading operation; or (b) more than ten milliliters of liquid drainage per disconnect from a bottom loading operation. Such liquid drainage shall be determined by computing the average drainage from three consecutive disconnects at any one loading arm.
11. ORGANIC LIQUID is any liquid compound containing the element carbon that has a vapor pressure of 1.5 psia (77.5 mm Hg) or greater under actual loading conditions excluding liquefied petroleum gases (LPG), methane, carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates, ammonium carbonate, and exempt compounds.
12. SUBMERGED FILL LOADING is a type of organic liquid loading operations where the discharge opening is completely submerged when the liquid level above the bottom of the vessel is eight centimeters (3.2 inches) or higher.
13. SWITCH LOADING is a transfer of organic liquids with a vapor pressure of less than 1.5 psia (77.5 mm Hg) under actual loading condition into any tank truck, trailer or railroad tank car that was loaded with an organic liquid with a vapor pressure of 1.5 psia (77.5 mm Hg) or greater immediately preceding the transfer.
14. TRANSFER EQUIPMENT shall consist of all the components of the liquid loading line between the liquid pump and the transporting vessel, and the vapor return line from the transporting vessel to the storage tank, or to and including the vapor recovery system.
15. TRANSPORT VESSEL is a tank truck, trailer or railroad tank car that is equipped to receive and transport organic liquid.
16. TRANSPORT VESSEL VAPOR LEAK is an escape of organic vapors from a transport vessel in excess of 100 percent of the LEL when monitored according to the CARB Test Procedure for Gasoline Vapor Leak Detection Using Combustible Gas Detector.
17. VAPOR DISPOSAL SYSTEM is a control equipment designed and operated to reduce VOC emissions into the atmosphere.
18. VAPOR RECOVERY SYSTEM is a vapor gathering system which is capable of collecting and returning discharged hydrocarbon vapors and gases during loading of organic liquids into transport vessels, back to a stationary storage container, or into an enclosed process system.
19. VOLATILE ORGANIC COMPOUND (VOC) is any volatile compound containing the element carbon, excluding methane, carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates, ammonium

carbonate, and exempt compounds.

(c) Applicability

The provisions of this rule shall apply to all the organic liquid loading facilities that are defined as Class A, B or C facilities pursuant to paragraphs (b)(2), (b)(3) and (b)(4) of this rule.

(d) Requirements

1. Loading Requirements at Class A Facilities
   A. From June 9, 1995 until January 31, 1999, each Class A facility shall be equipped with a vapor recovery and/or disposal system approved by the Executive Officer or designee. Effective February 1, 1999, each Class A facility shall be equipped with a CARB certified vapor recovery system and/or disposal system.
   B. Each vapor recovery and/or disposal system at a Class A facility shall be equipped with a continuous monitoring system (CMS) that is installed, operated, and maintained according to the manufacturer's specifications and is approved by the Executive Officer or designee.
   C. The transfer of organic liquids shall be accomplished in such a manner that the displaced organic vapors and air are vented under design conditions to the vapor recovery and/or disposal system.
   D. From June 9, 1995 until January 31, 1998, each system shall reduce the emissions of volatile organic compounds (VOC) to 0.29 pound or less per thousand gallons (35 grams per 1,000 liters) of organic liquid transferred. Effective February 1, 1998, each system shall reduce the emissions of VOCs to 0.08 pound or less per thousand gallons (10 grams per 1,000 liters) of organic liquid transferred.
   E. Any Class A facility transferring gasoline into any truck, trailer, or railroad tank car shall be designed and operated for bottom loading only.
   F. The transfer equipment shall be operated and maintained so that there are no overfills, facility vapor leaks, liquid leaks, or liquid leaks from disconnect operations.
2. Loading Requirements at Class B Facilities
   A. From June 9, 1995 until January 31, 1999, each Class B facility shall be equipped with a vapor recovery system which is approved by the Executive Officer or designee. Effective February 1, 1999, each Class B facility shall be equipped with a CARB certified vapor recovery system.
   B. Such system shall be designed and operated to recover at least 90 percent of the displaced vapors.
   C. The backpressure in the vapor recovery system shall not exceed 18 inches of water pressure.
   D. Any Class B facility transferring gasoline into any truck, trailer, or railroad tank car, shall be designed for bottom loading only.
   E. The transfer equipment shall be operated and maintained so that there are no overfills, facility vapor leaks, liquid leaks, or liquid leaks from disconnect operations.
3. Loading Requirements at Class C Facilities
   A. Each Class C facility shall be equipped and operated for submerged fill loading or bottom fill loading. All gasoline or equivalent vapor pressure organic liquids shall be transferred in this manner.
   B. The transfer equipment shall be operated and maintained so that there are no overfills, liquid leaks, or liquid leak from disconnect operations.
4. Loading Requirements for Transport Vessels
   A. No person shall allow loading or unloading of organic liquid or other use or operation of any transport vessel unless the vessel has a valid certification of vapor integrity as defined by the applicable Air Resources Board Certification and Test Procedures, pursuant to Health and Safety Code Section 41962(g) and the California Administrative Code Title 17, Section 94004.
   B. Transport vessel vapor leaks from dome covers, pressure vacuum vents or other sources shall be determined in accordance with the CARB Test Procedure for Gasoline Vapor Leak Detection Using a Combustible Gas Detector dated, September 1, 1982.
   C. The transport equipment shall be operated so such that there are no liquid leaks.
5. Switch Loading
   Uncontrolled switch loading is prohibited except at Class C facilities.
6. Leak Inspection Requirements
   A. The owner and operator of any Class A, B, or C facility shall be required to perform an inspection of the vapor collection system, the vapor disposal system, and each loading rack handling organic liquids, for

facility vapor leaks or liquid leaks of volatile organic compounds on one of the following schedule:
    i. monthly if sight, sound, and smell are used as detection methods.
    ii. quarterly if an organic vapor analyzer (OVA) is used to monitor for facility vapor leaks.
B. Each detection of a leak shall be repaired or replaced within 72 hours. The repaired or replacement component shall be reinspected the first time the component is in operation after the repair or replacement.

(e) Compliance Schedule

The owner and operator of any Class A, B, or C facility subject to this rule shall comply with the requirements of subdivision (d) in accordance with the following schedule:

1. For Class A facilities subject to paragraph (d)(1):
    A. By July 1, 1996, submit an application to the Executive Officer or designee for permit to construct a new or modified vapor recovery and/or disposal system where applicable.
    B. By February 1, 1997, submit a Continuous Monitoring System (CMS) Plan to the Executive Officer or designee for the approval.
    C. By February 1, 1998, demonstrate compliance with the organic vapor emission limit of 0.08 pound per thousand gallons of organic liquid transferred.
    D. Within 30 calendar days after completing construction of a new or modified vapor recovery and/or disposal system, a written request shall be submitted to CARB for certification of the new or modified vapor recovery and/or disposal system.
    E. By February 1, 1999, demonstrate compliance with the CARB certification of the existing or modified vapor recovery and/or disposal system.
2. For Class B facilities subject to paragraph (d)(2):
    A. By February 1, 1999, demonstrate compliance with the CARB certification of the existing vapor recovery system
3. For Class B facilities that were Class C facilities prior to June 9, 1995 and now are subject to paragraph (d)(2):
    A. By January 1, 1996, submit an application to the Executive Officer or designee for permit to construct and permit to operate a vapor recovery system where applicable.
    B. By February 1, 1998, demonstrate compliance with the requirement of 90 percent recovery of displaced vapors.
    C. Within 30 calendar days after completing construction of a new or modified vapor recovery system, a written request shall be submitted to CARB for certification of the new or modified vapor recovery and/or disposal system.
    D. By February 1, 1999, demonstrate compliance with the CARB certification requirement.

(f) Compliance Determination/Test Methods

1. Compliance with the emission limit of organic vapors as specified in the subparagraph (d)(1)(D) shall be determined according to EPA Method 25A, 25B or SCAQMD Method 501.1.
2. Continuous Monitoring System required pursuant to subparagraph (d)(1)(B) shall be in compliance with Code of Federal Regulation Title 40 Part 60 Appendix B.
3. Compliance with the vapor recovery efficiency as specified in the subparagraph (d)(2)(B) shall be determined according to CARB Method 202.
4. Determinations of facility vapor leaks as defined in the paragraph (b)(7) shall be conducted according to EPA Method 21.

(g) Recordkeeping

1. The owner and operator of any Class A, B, or C facility, in order to determine the classification of such facility, shall maintain a daily log of the throughput and a summary of the throughput for the calendar year to date, of the liquid organic compounds subject to the provisions of this rule.
2. The owner and operator of any Class A, B, or C facility shall maintain records for verification of compliance with the requirements in paragraph (d)(6). The records shall include, but are not limited to, inspection dates, description of leaks detected, repair/replacement dates, and reinspection dates. A single compliant daily log shall

suffice to satisfy this requirement.

3. All records shall be maintained at the facility for at least two years and shall be available to the Executive Officer or designee upon request.

(h) Distribution of Responsibilities

1. The owner and operator of any Class A, B, or C facility shall be responsible and liable for complying with the provisions of paragraphs (d)(1), (d)(2), (d)(3), and (d)(6) and subdivisions (e) and (g) of this rule, and for maintaining the equipment at the facility in such condition that it can comply with the requirements of this rule if properly operated. If employees of the owner or operator of the facility supervise or affect the transfer operation, the owner or operator of the facility shall be responsible for ensuring that the transfer operation complies with all requirements of this rule and that the transfer equipment is properly operated.
2. The owner, operator, and driver of a transport vessel shall be responsible and liable for complying with paragraphs (d)(4) and (d)(5) of this rule.

(i) Exemptions

1. The provisions of subparagraphs (d)(1)(F), (d)(2)(E) and (d)(3)(B) shall not apply to components found in violation of facility vapor leaks or liquid leaks either of which is detected and recorded originally by the owner or operator, provided the repair or replacement of applicable equipment is completed within the specified period as given in subparagraph (d)(6)(B).
2. The provisions of subparagraphs (d)(1)(A) and (d)(1)(B) shall not apply to vapor recovery and/or disposal systems which vent displaced hydrocarbon vapors to an adjacent refinery flare or other combustion device that receives gaseous streams from other refinery sources.

[SIP: Submitted as amended 6/9/95 on 10/13/95; approved 5/3/95, 60 FR 21702, _____, Approved 7/8/82, 47 FR 29668, 40 CFR 52.220(c)(88)(iii)(B); Approved 1/21/81, 46 FR 5965, 40 CFR 52.220(c)(47)(i)(B); Approved 7/26/77, 42

ANTELOPE VALLEY AIR POLLUTION CONTROL DISTRICT

RULE 463

Organic Liquid Storage

(**Adopted** 08/15/77; **Amended**: 06/01/84; **Amended** 12/07/90; **Amended** 03/11/94)

(a) Applicability

This rule applies to any above-ground stationary tank with a capacity of 75,000 liters (19,815 gallons) or greater used for storage of organic liquids, and any above-ground tank with a capacity between 950 liters (251 gallons) and 75,000 liters (19,815 gallons) used for storage of gasoline.

(b) Definitions

For purposes of this rule, the following definitions apply:

1. (1)Certified person is a person who has successfully completed the District tank self-inspection program, and who holds a certificate issued by the Executive Officer evidencing that such person is in good standing in this program.

2. EXEMPT COMPOUND is any of the following compounds which have been determined to be non-precursors of ozone:
   A. Group I

      chlorodifluoromethane (HCFC-22)

      trifluoromethane (HFC-23)

      dichlorotrifluoroethane (HCFC-123)

      2-chloro-1,1,2,2-tetrafluoroethane (HCFC-124)

      pentafluoroethane (HFC-125)

      1,1,2,2-tetrafluoroethane (HFC-134)

      tetrafluoroethane (HFC-134a)

      dichlorofluoroethane (HCFC-141b)

      chlorodifluoroethane (HCFC-142b)

      1,1,1-trifluoroethane (HFC-143a)

      1,1-diflouroethane (HFC-152a)

      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

      sulfur-containing perfluorocarbons with no unsaturations and with sulfur bonds only to carbon and fluorine

   B. Group II

      carbon tetrachloride

methylene chloride

1,1,1-trichloroethane (methyl chloroform)

trichlorotrifluoroethane (CFC-113)

dichlorodifluoromethane (CFC-12)

trichlorofluoromethane (CFC-11)

dichlorotetrafluoroethane (CFC-114)

chloropentafluoroethane (CFC-115)

Use of Group II compounds will be restricted in the future because they are either toxic or potentially toxic, or upper atmospheric ozone depleters, or cause other environmental impacts. Specifically, the District Board has established a policy to phase out chlorofluorocarbons (CFC), methyl chloroform (1,1,1-trichloroethane), and carbon tetrachloride on or before January 1, 1996.

3. GASOLINE means any petroleum distillate having a Reid vapor pressure of 200 mm Hg (3.9 pounds per square inch), or greater.

4. ORGANIC LIQUID is any liquid containing VOCs.

5. PRESSURE RELIEF VALVE (PRV) is a valve which is automatically actuated by upstream static pressure, and used for safety or emergency purposes.

6. SEAL is a closure device between the tank wall and the floating roof edge that controls emissions of volatile organic compounds. Approved floating roof tank seals are categorized as follows:
   A. Category "A" seals are seals approved by the Executive Officer as most effective in the control of volatile organic compounds and are deemed Best Available Control Technology (BACT) according to the criteria set forth in Attachment A - "Floating Roof Tank Seal Categories."
   B. Category "B" seals are seals approved by the Executive Officer that are considered more effective than Category "C" seals based on the criteria set forth in Attachment A - "Floating Roof Tank Seal Categories."
   C. Category "C" seals are seals approved by the Executive Officer which are currently in service but are considered least effective in the control of volatile organic compounds.

7. TANK is any stationary above-ground reservoir or any other stationary above-ground container used for storage of an organic liquid.

8. VAPOR TIGHT is a condition that exists when the reading on a portable hydrocarbon meter is less than 1,000 parts per million (ppm), expressed as methane, above background.

9. VOLATILE ORGANIC COMPOUND (VOC) is any volatile or gaseous chemical compound containing the element carbon, excluding methane, carbon monoxide, carbon dioxide, carbonic acid, metallic carbides, or carbonates, ammonium carbonate, and exempt compounds other than carbon tetrachloride.

(c)Tank Roof Requirements

No person shall place, store or hold in any tank with a capacity of 150,000 liters (39,630 gallons) or greater, any organic liquid having a true vapor pressure of 25.8 mm Hg (0.5 psi) absolute or greater under actual storage conditions, and in any tank of more than 75,000 liters (19,815 gallons) capacity, any organic liquid having a true vapor pressure of 77.5 mm Hg (1.5 psi) absolute or greater under actual storage conditions, unless such tank is a pressure tank maintaining working pressures sufficient at all times to prevent organic vapor loss to the atmosphere, or is designed and equipped with one of the following vapor control devices, which is properly installed and continuously maintained in good operating condition:

1. External Floating Roof

   An external floating roof shall consist of a pontoon-type or double deck-type cover that continuously rests on the

surface of the organic liquid and is equipped with a closure device between the tank shell and roof edge. The closure device shall consist of two seals, with one seal placed above the other. The seal below shall be designated as the primary seal, and the seal above shall be designated as the secondary seal. A seal which is not identified on the current list of seals approved by the Executive Officer shall not be installed or used unless the Executive Officer determines that such seal meets the applicable criteria of subparagraphs (c)(1)(A) through (c)(1)(C).

A. A closure device on a welded or a riveted tank shell which uses a metallic shoe-type seal as its primary seal shall comply with the following requirements:
   i. Gaps between the tank shell and the primary seal shall not exceed 1.3 centimeters (1/2 inch) for a cumulative length of 30 percent of the circumference of the tank, and 0.32 centimeter (1/8 inch) for 60 percent of the circumference of the tank. No gap between the tank shell and the primary seal shall exceed 3.8 centimeters (1-1/2 inches). No continuous gap between the tank shell and the primary seal greater than 0.32 centimeter (1/8 inch) shall exceed 10 percent of the circumference of the tank.

   ii. Gaps between the tank shell and the secondary seal shall not exceed 0.32 centimeter (1/8 inch) for a cumulative length of 95 percent of the circumference of the tank. No gap between the tank shell and the secondary seal shall exceed 1.3 centimeters (1/2 inch).

   iii. Metallic shoe-type seals installed on or after August 1, 1977 shall be installed so that one end of the shoe extends into the stored organic liquid and the other end extends a minimum vertical distance of 61 centimeters (24 inches) above the stored organic liquid surface.

   iv. The geometry of the shoe shall be such that the maximum gap between the shoe and the tank shell is no greater than double the gap allowed by the seal gap criteria specified in clause (c)(1)(A)(i) for a length of at least 46 centimeters (18 inches) in the vertical plane above the liquid surface.

B. A closure device which uses a resilient toroid-type seal as its primary seal shall comply with the applicable requirements of subparagraph (c)(1)(A).

C. The primary and secondary seals shall comply with the following requirements:
   i. The primary seal envelope shall be made available for unobstructed inspection by the Executive Officer along its circumference. In the
   ii. case of riveted tanks with resilient toroid-type seals, at least eight such locations shall be made available; for all other types of seals, at least four such locations shall be made available. If the Executive Officer deems it necessary, further unobstructed inspection of the primary seal may be required to determine the seal's condition along its entire circumference.
   iii. The secondary seal shall be installed in a way that permits the Executive Officer to insert probes up to 3.8 centimeters (1-1/2 inches) in width to measure gaps in the primary seal.
   iv. The secondary seal shall extend from the roof to the tank shell and shall not be attached to the primary seal.
   v. Notwithstanding the secondary and the primary seal requirements of paragraph (c)(1), a secondary or primary seal may be loosened or removed for preventive maintenance, inspection or repair for a period not exceeding 72 hours with prior notification to the Executive Officer .

D. All openings in the roof except pressure-vacuum valves, shall provide a projection below the liquid surface to prevent belching, escape, or entrainment of organic liquid, and shall be equipped with a cover, seal or lid. The cover, seal, or lid shall at all times be in a closed position, with no visible gaps, except when the device or appurtenance is in use. Pressure vacuum valves shall be set to within 10 percent of the maximum allowable working pressure of the roof.

E. There shall be no holes, tears or openings in the secondary seal or in the primary seal envelope surrounding the annular vapor space enclosed by the roof edge, seal fabric, and secondary seal.

F. Any emergency roof drain shall be provided with a slotted membrane fabric cover, or equivalent device, that covers at least nine-tenths (9/10) of the area of the opening.

2. Internal Floating-Type Cover

A fixed roof tank equipped with an internal floating-type cover shall comply with the following requirements:

A. A fixed roof tank with an existing internal floating-type cover approved by the Executive Officer on or before June 1, 1984, shall comply with the requirements applicable at the time such approval was given.

B. A fixed roof tank which has an internal floating-type cover installed, modified, or replaced after June 1, 1984, shall have a closure device which consists of either a single liquid mounted primary seal or a primary and a secondary seal. All openings and fittings shall be fully gasketed or controlled in a manner specified by the Executive Officer. The closure device shall control vapor loss with an effectiveness equivalent to a closure device which meets the requirements of subparagraph (c)(1)(A). Seal designs not identified on the current list of seals approved by the Executive Officer shall not be installed or used unless the Executive Officer has given his prior written approval to its installation or use. For purposes of this paragraph, modification includes an identical replacement.

C. The concentration of organic vapor in the vapor space above the internal floating-type cover shall not exceed 50 percent of its lower explosive limit (LEL) for those installed prior to June 1, 1984 and 30 percent of its LEL for those installed after June 1, 1984. Compliance shall be verified by the use of an explosimeter.

3. Vapor Recovery System

A fixed roof tank equipped with a vapor recovery system shall comply with the following requirements:

A. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a vapor-tight cover which shall be closed at all times except during gauging or sampling. The roof of such tank shall be properly maintained to be vapor tight with no holes, tears or uncovered openings.

B. All piping, valves and fittings shall be constructed and maintained in a vapor-tight condition, in accordance with requirements of other District rules for such equipment.

C. For purposes of this paragraph, the efficiency of a vapor recovery system shall be determined by making a comparison of controlled emissions to those emissions which would occur from a fixed cone roof tank holding the same organic liquid without a vapor control or vapor recovery system. The vapor recovery system shall have an efficiency of at least 95 percent by weight.

(d) Other Performance Requirements

1. A person shall not place, store or hold gasoline in any tank, with a capacity of between 950 liters (251 gallons) and 75,000 liters (19,815 gallons) unless such tank is equipped with a pressure-vacuum valve which is set to within 10 percent of the maximum allowable working pressure of the container, or is equipped with a vapor loss control device which complies with the requirements set forth in subdivision (c).

2. The roof of any internal or external floating roof tank shall float on the organic liquid at all times (i.e., free of the roof leg supports) except when the tank is being completely emptied for cleaning, or repair. The process of emptying or refilling, when the roof is resting on leg supports, shall be continuous.

3. If a tank has been gas-freed and is to be refilled with gasoline, the roof shall be refloated with water or by an equivalent procedure approved by the Executive Officer. Paragraphs (d)(2) and (d)(3) shall be inapplicable to gasoline storage tanks at bulk gasoline distribution terminals which do not have:
   A. existing facilities for treatment of waste water used to refloat the tank roof; or
   B. facilities for equivalent emission control when refloating the roof with organic liquid.
4. No crude oil containing in excess of 70 ppm by weight of hydrogen sulfide shall be stored in a floating roof tank.

5. A fixed roof tank with an internal floating-type cover or a tank with an external floating roof cover shall not be used for storing organic liquids having a true vapor pressure of 11 psia (569 mm Hg) or greater under actual storage conditions.

6. Replacement of a seal on a floating roof tank shall be allowed only if the replacement seal is chosen from the current list of seals approved by the Executive Officer. Category "A" seals shall be replaced only by Category "A" seals. Category "B" seals shall be replaced only by Category "A" or Category "B" seals. Category "C" seals shall be replaced

only by Category "A" or Category "B" seals.

(e) Self-Inspection of Floating Roof Tanks

Any owner or operator of a floating roof tank(s) shall conduct self-inspections of its tank(s) according to the following procedures:

1. Inspection and Maintenance Plan

   A. On or before September 14, 1994, each owner or operator shall submit an Inspection and Maintenance Plan to the Executive Officer for his/her approval. After September 14, 1994, each owner or operator constructing tank(s) subject to this rule shall submit an Inspection and Maintenance Plan, or a revision of its current Inspection and Maintenance Plan, to the Executive Officer prior to the completion of construction. The Inspection and Maintenance Plan shall include an inventory of tanks subject to this rule, the proposed self-inspection schedule, the number of certified persons to be dedicated to the program, any self-inspection procedures proposed in addition to those required by the District, and a copy of the owner or operator's safety procedures used for floating roof tanks. The tank inventory shall include tank identification number, maximum design capacity, product, shell type, dimensions, seal type and manufacturer, floating roof type, date of construction and location.

2. Identification Requirements

   A. All tanks subject to this rule shall be clearly and visibly identified by a sign on the outside wall for inventory, inspection and recordkeeping purposes.

   B. Any change(s) in tank identification shall require prior written approval by the Executive Officer.

3. Owner or Operator Inspection Requirements
   A. All tanks subject to this rule shall be inspected by a certified person twice per year at 4 to 8 months intervals according to the procedures and guidelines set forth in Attachment B - "Inspection Procedures and Compliance Report Form."
   B. The primary and secondary seals shall be inspected by a certified person each time a tank is emptied and degassed. Gap measurements shall be performed on an external floating roof tank when the liquid surface is still but not more than 24 hours after the tank roof is refloated.
   C. The Executive Officer shall be notified in writing at least 2 weeks prior to the start of any tank-emptying or roof-refloating operation for planned maintenance of a tank.
4. Maintenance Requirements

   Any tank which does not comply with any provision of this rule shall be brought into compliance within 72 hours of the determination of non-compliance.

5. Reporting and Recordkeeping Requirements

   (A)All inspections shall be recorded on compliance inspection report forms approved by the Executive Officer as described in Attachment B - "Inspection Procedures and Compliance Report Form."

   (B)All compliance inspection reports and documents shall be submitted to the Executive Officer within 5 working days of completion of the self-inspection.

   (C)If a tank is determined to be in violation of the requirements of this rule, a written report shall be submitted to the Executive Officer within 120 hours of the determination of non-compliance, indicating corrective actions taken to achieve compliance.

   (D)All records of owner or operator inspection and repair shall be maintained at the facility for a period of 3 years and shall be made available to the Executive Officer upon request.

   (E)Emissions Reporting

   (i)An owner or operator shall provide emissions information in a format consistent with Attachment C to the

Executive Officer upon request. The requirement shall apply to all organic liquid storage tanks without regard to exemptions specified in subdivision (f).

(ii)An owner or operator shall provide all upset emissions information associated with product change, repair, and turnover or any other excess emission incidents.

i. An owner or operator shall maintain records of emissions data for all organic liquid storage tanks for the most recent two (2) year period.

(f)Exemptions

The provisions of this rule shall not apply to the following tanks, provided the person seeking the exemption supplies proof of the applicable criteria sufficient to satisfy the Executive Officer:

(1)Oil production tanks with a capacity of between 75,000 liters (19,815 gallons) and 159,000 liters (42,008 gallons) which have a properly maintained vapor-tight roof and are equipped with a pressure-vacuum valve which is set within 10 percent of the maximum allowable working pressure of the tank, are exempt from the control requirements of this rule when:

(A)The organic liquid contents fail to comply with paragraph (b) only when heated for shipment, and such heating occurs for not more than 48 hours and not more than once in any 20-day period; or

(B)The tank has a monthly average throughput of not more than 30 barrels of oil per day and was constructed prior to June 1, 1984.

(2)Tanks being brought into compliance within the time period specified in paragraph (e)(4).

(g)Test Methods

(1)Efficiency of a vapor recovery system specified in subparagraph (c)(3)(C) shall be determined according to SCAQMD Test Method 501.1 for the determination of total organic compound emissions. EPA Methods 25 or 25A may be used, as applicable, in place of SCAQMD Test Method 25.1 specified in Method 501.1. An efficiency determined to be less than established by this rule through the use of any of the above-referenced test methods shall constitute a violation of the rule. Baseline emissions shall be calculated by using the criteria outlined in American Petroleum Institute Bulletin 2518.

1. Exempt compounds shall be determined according to SCAQMD Test Method 303. For the purpose of testing the efficiency of a vapor recovery system, exempt compounds shall be determined according to EPA Method 18 or ARB Method 422. Any test method(s) for exempt compounds which cannot be identified through these referenced test methods shall be specified by the owner of operator seeking an exemption and shall be subject to approval in accordance with the procedures set forth in paragraph (g)(6).

(3)The Reid vapor pressure specified in paragraph (b)(3) and the Reid vapor pressure used in determining the true vapor pressure limit specified in paragraph (d)(5) shall be determined according to ASTM D-323-82 or California Code of Regulations, Title 13, Section 2297.

(4)Vapor tight condition specified in subparagraphs (c)(3)(A) and (c)(3)(B) shall be determined according to EPA's Reference Method 21 subject to the following limitations:

(A)vapor tight condition shall be determined at a distance of 1 cm. or less from the source ; and

(B)the soap bubble test shall not be used in lieu of quantitative test methods for vapor tightness determination.

(5)The hydrogen sulfide concentration limit specified in paragraph (d)(4) shall be determined according to SCAQMD Method 315.

(6)Alternate test methods which are new methods not previously referenced in this rule, or which involve major changes to a referenced test method, may be used if they are approved in advance as a source-specific SIP revision by the United States Environmental Protection Agency and the California Air Resources Board, and have been authorized by the Executive Officer.

[SIP Approved 10/28/96, 61 FR 54941, 40 CFR 52.220(c)(197)(i)(A)(2); Approved 1/15/87, 52 FR 1627, 40 CFR 52.220(c)(156)(vii)(A); Approved _____, _____, 40 CFR 52.220(c) (42)(xvi)(A); Approved 9/8/78, 43 FR 40011, 40 CFR 52.220(c)(31)(vi)(A)]

RULE 463 - ADDENDUM

Storage Temperatures Versus Actual Vapor Pressure

(Gravity/Initial Boiling Points Referenced)

	Reference Property		Temperature, °F Not to Exceed Vapor Pressure	
	A - °API	B - IBP, °F		
Organic Liquids	A	B	0.5 psia	1.5 psia
Crude Oils	12	--	--	--
	13	--	120	180
	14	--	85	145
	16	--	60	107
	18	--	55	93
	20	--	52	84
	22	--	49	77
	24	--	45	73
	26	--	42	70
	28	--	40	67
	30	--	38	64
Middle Distillates				
Kerosene	42.5	350	195	
Diesel	36.4	372	230	250
Gas Oil	26.2	390	249	290
Stove Oil 23	421	275	340	310
Jet Fuels				
JP-1	43.1	330	165	230
JP-3	54.7	110	--	25
JP-4	51.5	150	20	68
JP-5	39.6	355	205	260
JP-7	44-50	360	205	260
Fuel Oil				
No. 1	42.5	350	195	250
No. 2	36.4	372	230	290
No. 3	26.2	390	249	310
No. 4	23	421	275	340
No. 5	19.9	560	380	465
No. 6	16.2	625	450	--
Asphalts				
60 - 100 pen.	--	--	490	550
120 - 150 pen.	--	--	450	500
200 - 300 pen.	--	--	360	420

Acetone	47.0	133	--	35
Acrylonitrile	41.8	173	30	60
Benzene	27.7	176	35	70
Carbon Disulfide	10.6	116 (lb/gal)	--	10
Carbon Tetrachloride	13.4	170	30	60
Chloroform	12.5	142 (lb/gal)	--	40
Cylohexane	49.7	177	35	70
1,2 Dichloroethane	10.5	180 (lb/gal)	35	77
Ethyl Acetate	23.6	171	35	70
Ethyl Alcohol	47.0	173	45	83
Isopropyl Alcohol	47.0	181	45	87
Methyl Alcohol	47.0	148	--	50
Methylene Chloride	11.1	104 (lb/gal)	--	70
Methylethyl Ketone	44.3	175	30	70
1,1,1-Trichloroethane	11.2	165 (lb/gal)	60	100
Trichloroethylene	12.3	188 (lb/gal)	50	91
Toluene	30.0	231	73	115
Vinyl Acetate	19.6	163	--	60

Floating Roof Tank Seal Categories

Primary Seals

	Category A	**Category B**	**Category C**
1.	Liquid mounted multiple wipers with drip curtain and weight	Liquid mounted single wiper with drip curtain and weight	Liquid mounted single wiper
2.	Liquid mounted mechanical shoe	Liquid mounted double foam wipers with vapor curtain	Liquid mounted foam log
3.		Vapor mounted primary wiper	Liquid mounted foam log with vapor curtain
4.		Vapor mounted E wiper	Liquid mounted resilient toroid type liquid filled log
5.		Vapor mounted double wipers	Vapor mounted foam log/bag
6.		Vapor mounted double foam wipers	Vapor mounted foam wiper
7.		Vapor mounted multiple wipers	

Secondary Seals

	Category A	**Category B**	**Category C**
1.	Multiple wipers	Single wiper	Liquid mounted wiper Foam log/bag Maloney

Criteria used for categorization of floating roof tank seals:

1.Emission control effectiveness design

2.Ability to maintain contact with tank wall

3.Longevity in service

ATTACHMENT B

INSPECTION PROCEDURES AND COMPLIANCE REPORT FORM

Equipment Needed:

Explosimeter (for internal floating roof tanks), liquid resistant measuring tape or device, tank probe (to measure gaps in tank seals - 1/8 inch, 1/2 inch, 1-1/2 inch), flashlight.

Inspection Procedures:

1. The findings of all tank self-inspections, whether completed or not, shall be recorded on the Rule 463 Compliance Report form prescribed by the Executive Officer and submitted to the District's Refinery Section in accordance with the rule's requirements. If an inspection is stopped before completion, indicate the reason for this action in the Comments section of the compliance report form.

2. During compliance inspection, the person(s) conducting the inspection must have a copy of the Permit to Operate or Permit to Construct pertinent to the tank being inspected. Any discrepancies between the permit equipment description and the existing tank or the permit conditions and the actual operating conditions of the tank as verified during inspection must be recorded in the Comments section of the compliance report form.

3. Inspect the ground level periphery of each tank for possible leaks in the tank shell. Complete the tank information section (D) on the report.

4. For external floating roof tanks:
    - From the platform, conduct an overall visual inspection of the roof and check for obvious permit or rule violations. Record the information as shown under section F of the compliance report form.
    - During visual inspection of the roof, check for unsealed roof legs, open hatches, open emergency roof drains or vacuum breakers and record the findings on the report accordingly. Indicate presence of any tears in the fabric of both seals.
    - After the visual inspection, conduct an inspection of the entire secondary seal using the 1/8" and 1/2" probes. Record the gap data in section F(4) of the report.
    - Conduct an inspection of the entire primary seal using the 1/8", 1/2", and 1 1/2" probes. Inspect the primary seal by holding back the secondary seal. Record the gap data in section F(5) of the report.
    - Record all cumulative gaps between 1/8 inch and 1/2 inch ; between 1/2 inch and 1-1/2 inch ; and in excess of 1-1/2 inches, for both primary and secondary seals in section G of the report. Secondary seal gaps greater than 1/2 inch should be measured for length and width, and recorded in Comments under section (J) of the report.

5. For internal floating roof tanks:
    - Using an explosimeter, measure the concentration of the vapor space above the internal floating roof in terms of lower explosive limit (LEL), and record the reading in section (E) of the report.
    - Conduct a visual inspection of the roof openings and the secondary seal, if applicable, and record findings on the report.

6. Complete all necessary calculations and record all required data accordingly on the report.

ANTELOPE VALLEY AIR POLLUTION CONTROL DISTRICT

RULE 463 COMPLIANCE REPORT

****PLEASE COMPLETE FORM LEGIBLY IN BLACK INK****

Tank No. _____ SCAQMD Permit No: _____ Inspection Date: _____ Time: _____

Is this a follow-up inspection? __ Yes __ No If Yes, date of Previous Inspection: _____

A. COMPANY INFORMATION:

Company Name: _____

Location Address: _____ City: _____ ZIP: _____

Mailing Address: _____ City: _____ ZIP: _____

Contact Person: _____ Title: _____

B. INSPECTION CONDUCTED BY:

Name: _____ Title: _____

Company Name: _____ Phone: (___) _____

Mailing Address: _____ City: _____ ZIP: _____

C. TANK INFORMATION:

Capacity: _____(bbls) Installation Date: _____ Tank Diameter: _____ (ft) Tank Height: _____ (ft)

Product Type: _____ Product RVP: _____ If Crude, H_2S Content: _____ (ppm weight)

Type of Tank:

Riveted: o Welded: o Other o (describe) _____

Color of Shell: _____ Color of Roof: _____

Type of Roof:

Pontoon: o Double Deck: o Other o (describe) _____

External floating roof: o Internal floating roof: o

D. GROUND LEVEL INFORMATION:

1) Product Temperature: _____ ^oF 2) Product level _____ (ft)

3) List type and location of leaks found in tank shell.

4) List any discrepancies between the existing equipment and the equipment description on the Permit.

5) Is tank in compliance with permit conditions: ___ No ___ Yes

If no, explain _____

_____

_____

E. **INTERNAL FLOATING ROOF TANK:**

1) Check vapor space between floating roof and fixed roof with expiosimeter. _____ % LEL

2) Conduct visual inspection of roofs and secondary seals, if applicable.

3) Are all roof openings covered? ____ No ____ Yes If No, explain in comments section (J) and proceed to part (H)(6).

F. **EXTERNAL FLOATING ROOF TANK:**

1) On the diagram (below) indicate the location of the ladder, roof drain(s), anti-rotation device(s), platform, gauge well, and vents or other appurtenances. *Note information in relation to North (to the top of the worksheet).*

2) Describe any uncovered openings found on the roof in the Comments section (J). (Refer to Rule 463(a)(1)(F)):

3) Identify any tears in the seal fabric. Describe and indicate on diagram (below):

_____

_____

_____

_____

4) Secondary Seal Inspection:

a) Type of Secondary Seal: _____

b) Does 1/2¨ probe drop past seal? ____ No ____ Yes if yes, measure length(s) and show on diagram

c) Does 1/8¨ probe drop past seal? ____ No ____ Yes if yes, measure length(s) and show on diagram

d) Record dimensions of pag for gaps > 1/8¨ ____ > 1/2¨ ____

NOTE: Record the actual width and cumulative length of gaps in feet and inches.

(Do not include gaps > 1/2" in 1/8" measurements)

5) Primary Seal Inspection:

a) Type of Primary Seal: o Shoe; o Tube; o Other _____

b) (shoe seal) does 1-1/2" probe drop past seal? ____ No ____ Yes if yes, measure length(s) and show on diagram

c) (shoe seal) does 1/2" probe drop past seal? ____ No ____ Yes if yes, measure length(s) and show on diagram

d) (tube seal) does 1/2" probe drop past seal? ____ No ____ Yes if yes, measure length(s) and show on diagram

e) (all seal types) does 1/8" probe drop past seal? ____ No ____ Yes if yes, measure length(s) and show on diagram

f) Record dimensions of gaps for gaps

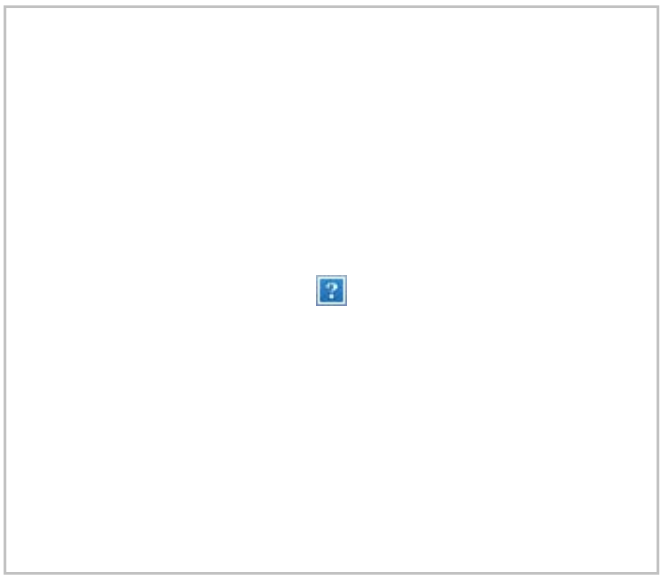
> 1/8" _____ > 1/2" _____ > 1-1/2" _____

NOTE: Record the actual width and cumulative length of gaps in feet and inches.

(Do not include gaps > 1/2" in 1/8" measurements, or gaps > 1-1/2" in 1/2" measurements)

NOTE: Show defects using symbols. Show seal gaps and lengths.

N



IF INTERNAL FLOATING ROOF TANK, PROCEED TO PART H(6).

G. CALCULATIONS - complete all applicable portions of the following:

Record dimensions of indicated gaps [from F(4)(d), F(5)(b), and F(5)(f)]. Record in feet and inches.

Gaps in primary seal between 1/8 and 1/2 inch: _____

Gaps in primary seal between 1/2 and 1-1/2 inch: _____

Gaps in primary seal greater than 1-1/2 inches: _____

Gaps in primary seal greater than 1-1/2 inches: _____

Gaps in secondary seal between 1/8 and 1/2 inch: _____

Gaps in secondary seal greater than 1/2 inch: _____

Multiply diameter (ft) of tank to determine appropriate gap limits:

5% circumference = diameter X 0.157 = _____ 60% circ. = diam. X 1.88 = _____

10% circumference = diameter X 0.314 = _____ 90% circ. = diam. X 2.83 = _____

30% circumference = diameter X 0.942 = _____ 95% circ. = diam. X 2.98 = _____

H. DETERMINE COMPLIANCE STATUS OF TANK:

Were any openings found on the roof?

1) ___ No ___ Yes

2) Were any tears in the seals found: ___ No ___ Yes

3) Is the product level lower than the level at which the roof would be floating? ___ No ___ Yes

4) Secondary Seal

Did 1/2" probe drop between shell and seal? ___ No ___ Yes

Did cumulative 1/8" - 1/2" gap exceed 95% circumference length? ___ No ___ Yes

5) Primary Seal

Shoe

Did 1-1/2" probe drop between shell and seal? ___ No ___ Yes

Did cumulative 1/2" - 1-1/2" gap exceed 30% circumference length, and ___ No ___ Yes

Did cumulative 1/8 - 1/2" gap exceed 60% circumference length? ___ No ___ Yes

Did any single continuous 1/8" - 1-1/2" gap exceed 10% circ. length? ___ No ___ Yes

Tube

Did 1/2" probe drop between shell and seal? ___ No ___ Yes

Did cumulative 1/8" - 1/2" gap exceed 95% circumference length? ___ No ___ Yes

6) Internal floating roof (installed before 6/1/84) did LEL exceed 50% ___ No ___ Yes

(installed after 6/1/84) did LEL exceed 30%? ___ No ___ Yes

7) Does tank have permit conditions? ___ No ___ Yes

Does tank comply with these conditions? ___ No ___ Yes

I. **IF INSPECTION WAS TERMINATED PRIOR TO COMPLETION FOR ANY REASON, PLEASE EXPLAIN:**

_____

_____

_____

J. **COMMENTS:**

Use this section to complete answers to above listed items and to describe repairs made to the tank; include date and time repairs were made.

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

K. ***I(We) certify the foregoing information to be correct and complete to the best of my(our) knowledge.***

Inspection completed by: _____ _____ Date:_____

(signature) (certification ID #)

Compliance status by: _____ _____ Date:_____

(signature) (certification ID #)

Company Representative: _____ _____ Date:_____

(signature) (certification ID #)

SEND COMPLETED REPORT TO:

ANTELOPE VALLEY AIR POLLUTION CONTROL DISTRICT
P.O. BOX 4409

LANCASTER, CA 93539-4409
FAX (661) 723-3450

The data items shall include, but not be limited to, the following:

A. External Floating Roof Tank

1. Tank I.D.
2. Product Code
3. Type of Floating Roof Seal
4. Shell Construction
5. Reid Vapor Pressure
*6. Average Stock Storage Temperature
7. True Vapor pressure
8. Tank Diameter
*9. Wind Speed Exponent
*10. Average Wind Velocity
*11. Seal Factor
*12. Product Factor
*13. Vapor Molecular Weight
*14. Clingage Factor
15. Throughput
*16. Density of Liquid Stock
17. Total Number of Different Type of Fitting
18. Total Roof Fitting Loss Factor
19. Vapor Pressure Function
20. Roof Fitting Loss
21. Standing Loss
22. Withdrawal Loss
23. Total Loss
24 Number of Excess Upset Emissions Incidents
25. Total excess Upset Emissions

B. Internal Floating Roof Tank

1. Tank I.D.
2. Product Code
3. Type of Floating Roof Seal
4. Shell Construction
5. Reid Vapor Pressure
*6. Average Stock Storage Temperature
7. True Vapor Pressure
8. Tank Diameter
*9. Wind Speed Exponent
*10. Average Wind Velocity
*11. Seal Factor
*12. Product Factor
*13. Vapor Molecular Weight
*14. Clingage Factor
15. Throughput
*16. Density of Liquid Stock
*17. Number of Columns
*18. Effective Column Diameter
19. Total Number of Different Types of Fittings
*20. Total Deck Fitting Loss Factor
21. Vapor Pressure Function
*22. Deck Seam Length Factor
*23. Deck Seam Loss per Unit
24. Deck Seam Loss
25. Deck Fitting Loss
26. Standing Loss
27. Withdrawal Loss
28. Total Loss
29. Number of Excess Upset Emissions Incidents
30. Total Excess Upset Emissions

C. Roof Tank

1. Tank I.D.
2. Product Code
3. Vent Type to Vapor Recovery System
*4. Average Stock Storage Temperature
5. True Vapor Pressure
6. Tank Diameter
*7. Vapor Molecular Weight
8. Average Outage
*9. Average Daily Temperature Change
10. Throughput
11. Turnover Factor
*12. Turnovers Per Year
*13. Adjustment Factor for Small Tank
*14. Paint Factor
*15. Crude-Oil Factor (Breathing)
*16. Crude-Oil Factor (Working)
17. Breathing Loss
18. Working Loss
19. Total Loss (Without Vapor Recovery)
*20. Vapor Recovery System Efficiency
21. Total Loss (With Vapor Recovery)
22. Number of Excess Upset Emissions Incidents
23. Total Excess Upset Emissions

*****Default values are available from the District

The Data format and order shall be specified and approved by the Executive Officer.

	A	B	C	D	E	F	G	H	I	J	K	L
1	TANK I.D.	PRODUCT CODE	TYPE OF FLOATING ROOF SEAL	SHELL CONSTRUCT.	REID VAPOR PRESSURE	AVE. STOCK STOR. EMP.	TRUE VAPOR PRESSURE	TANK DIAMETER	WIND SPEED EXP.	AVE. WIND VELOCITY	SEAL FACTOR	PRODUCT FACTOR
2					psi	F	psia	feet		mile/hour		
3	1	6	1C	W	2	68	1.1	80	1	6.8	0.2	0.4
4	2	3	1C	W	0.03	68	0.01	95.5	1	6.8	0.2	1
5	3	9	1C	W	0	68	0	95.5	1	6.8	0.2	1

6	4	3	1C	W	0.03	68	0.01	90	1	6.8	0.2	1
7	25	5	4A	R	0.2	68	0.01	117.2	1.5	6.8	1.3	1
8	26	5	1A	W	0.2	68	0.01	120	1.5	6.8	1.2	1
9	27	9	1A	W	0	99	0	120	1.5	6.8	1.2	1

	M	N	O	P	Q	R	S	T	U	V
1	VAPOR MOLECULAR WEIGHT	CLINGAGE FACTOR	THROUGHPUT	DEN. OF LIQUID STOCK	TOTAL NO. OF DIFF. TYPE OF FITTING	TOTAL ROOF FITTING LOSS FACTOR	VAPOR PRESSURE FUNCTION	ROOF FITTING LOSS	STANDING LOSS	WITHDRAWAL LOSS
2	lb/lb Mole	bbl/1000 sq. ft.	bbl/year	lb/gal		lb mole/year		lbs/year	lbs/year	lbs/year
3	50	0.6	334914	7.1	3	147.3	2	55	42	168
4	130	0.15	234841	7.1	3	152.3	0	3	3	25
5	190	0.15	73651	7.9	3	152.3	0	0	0	9
6	130	0.15	151702	7.1	3	146.6	0	3	2	17
7	130	0.15	184615	7	3	158.6	0	3	60	16
8	130	0.15	2223784	7	3	162.1	0	3	19	183
9	190	0.15	773173	7.9	2	162.1	0	0	0	72

	W	X	Y
1	TOTAL LOSS	NO. OF EXCESS UPSET INCIDENTS	TOTAL UPSET EMISSIONS
2	lbs/year		lb/year
3	265	0	0
4	30	2	0.1
5	9	0	0
6	22	0	0
7	79	0	0
8	206	0	0
9	73	0	0

	A	B	C	D	E	F	G	H	I	J	K	L
1	TANK I.D.	PRODUCT CODE	TYPE OF FLOATING ROOF SEAL	SHELL CONSTRUCTION	REID VAPOR PRESSURE	AVE. STOCK STOR. EMP.	TRUE VAPOR PRESSURE	TANK DIAMETER	WIND SPEED EXP.	AVE. WIND VELOCITY	SEAL FACTOR	PRODUCT FACTOR
2					psi	F	psia	feet		mile/hour		
3	12	2	5A	W	3.4	140	6.2	64	0	6.8	3	0.4
4	13	2	6A	W	3.4	140	6.2	64	0	6.8	6.7	0.4

	M	N	O	P	Q	R	S	T	U	V
1	VAPOR MOLECULAR WEIGHT	CLINGAGE FACTOR	THROUGHPUT	DEN. OF LIQUID STOCK	NO. OF COLUMNS	EFFECTIVE COLUMN DIAMETER	TOTAL NO. OF DIFF. TYPE OF FITTING	TOTAL DECK FITTING LOSS FACTOR	VAPOR PRESSURE FUNCTION	DECK SEAM LEN. FACTOR
2	lb/lb Mole	bbl/1000 sq. ft.	bbl/year	lb/gal		feet		lb mole/year		1/ft
3	50	0.006	466095	7.1	1	1	0	105	0.14	0
4	50	0.006	466095	7.1	1	1	0	210	0.14	0

	W	X	Y	Z	AA	AB	AC	AD
1	DECK SEAM LOSS PER UNIT	DECK SEAM LOSS	DECK FITTING LOSS	STANDING LOSS	WITHDRAWAL LOSS	TOTAL LOSS	NO. OF EXCESS UPSET INCIDENTS	TOTAL UPSET EMISSIONS
2	lb mole/ft year	lbs/year	lbs/year	lbs/year	lbs/year	lbs/year		lbs/year
3	0	0	286	523	297	1106	0	0
4	0	0	571	1167	297	2035	0	0

	A	B	C	D	E	F	G	H	I	J	K
1	TANK I.D.	PRODUCT CODE	VENT TYPE TO VAPOR RECOVERY SYSTEM	AVE. STOCK STOR. TEMP.	TRUE VAPOR PRESSURE	TANK DIAMETER	VAPOR MOLECULAR WEIGHT	AVE. OUTAGE	AVE. DAILY TEMP. CHANGE	THROUGHPUT	TURNOVER FACTOR
2					psi	F	psia	feet	F	bbl/year	
3	210	9	N	99.99	0	120	190	14	16	300027	1
4	285	9	N	99.99	0	35	190	0	16	151414	1
5	286	9	N	99.99	0	35	190	0	16	151414	1
6	294	9	V	68	0	120	190	20	16	505615	1

	L	M	N	O	P	Q	R	S	T
1	TURNOVERS PER YEAR	ADJ. FACTOR FOR SMALL TANK	PAINT FACTOR	CRUDE OIL FACTOR (BREATHING)	CRUDE OIL FACTOR (WORKING)	BREATHING LOSS	WORKING LOSS	TOTAL LOSS (W/O VAPOR RECOVERY)	VAPOR RECOVERY SYSTEM EFFICIENCY
2						lbs/year	lbs/year	lbs/year	
3	4	1	1	1	1	56	3	60	0
4	30	1	1	1	1	0	2	2	0
5	30	1	1	1	1	0	2	2	0
6	6	1	1	1	1	68	6	74	95

	U	V	W
1	TOTAL LOSS (w/ vapor recovery)	NO. OF EXCESS UPSET EMISSIONS INCIDENTS	TOTAL UPSET EMISSIONS
2	lbs/year		lb/year
3	60	0	0
4	2	0	0
5	2	0	0
6	4	0	0

ANTELOPE VALLEY AIR POLLUTION CONTROL DISTRICT

RULE 464
Wastewater Separators

(Adopted: 05/07/76; Amended: 09/01/78; Amended: 04/06/79; Amended: 04/04/80; Amended 12/07/90)

(a) Definitions

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

1. **WASTEWATER SEPARATOR** is a wastewater treatment equipment used to separate petroleum-derived compounds from wastewater, which includes separator basins, skimmers, grit chambers, and sludge hoppers.
2. **WASTEWATER SEPARATOR FOREBAY**is that section of a gravity-type separator which (a) receives the untreated, contaminated wastewater from the preseparator flume, and (b) acts as a header which distributes the influen4 to the separator channels.

(b) Requirements

1. A person shall not use any compartment of any vessel or device operated for the recovery of oil or tar from effluent water from any equipment which processes, refines, stores or handles petroleum or coal tar products unless such compartment is equipped with one of the following vapor loss control devices:
   A. a solid cover with all openings sealed and totally enclosing the liquid contents of the compartment; or
   B. a floating pontoon or double-deck type cover, equipped with closure seals that have no tears or leaks, installed and maintained so the gaps between the compartment wall and the seal shall not exceed 0.32 centimeter (1/8 inch) for an accumulative length of 97 percent of the perimeter of the compartment. No gap between the compartment wall and the seal shall exceed 1.3 centimeters (1/2 inch).
2. Any gauging and sampling device in the compartment cover shall be equipped with a cover or lid. The cover shall be in a closed position at all times, except when the device is in actual use. There shall be no visible gaps between the cover and the compartment when the cover is closed.
3. All wastewater separator forebays shall be covered.
4. Skimmed oil or tar removed from wastewater separating devices shall be either charged to process units with feed or transferred to a container approved by the Executive Officer. A Permit to Operate issued for the container in such service shall be considered to be approval by the Executive Officer.

(c) Exemptions

This rule shall not apply to:

1. gravity type wastewater separators used exclusively in conjunction with the production of crude oil if the water fraction of the wastewater entering the separator contains less than 5 ppm hydrogen sulfide, organic sulfides, or a combination thereof, and less than 100 ppm ammonia.
2. all units which handle only coal tar products with a true vapor pressure of less than 10 mm Hg (0.2 pound per square inch) at 60oF.
3. any compartment of a wastewater separator for which the operator has demonstrated to the satisfaction of the Executive Officer that compliance with section (b) will cause the value of

$$\frac{A}{f \times V}$$ to exceed 420, where

A *is the area to be covered in square feet.*
V *is the oil recovery rate in gallons/day on an annual basis.*
f *is the estimated fractional volume loss of oil and is computed as:*
f $= - 0.0663 + 0.000319 \times$ *(annual mean ambient temperature,* ^{o}F*)*

- 0.000286 x (10% true boiling point, ^{o}F)

+ 0.00215 x (annual average influent temperature, ^{o}F)

The provisions of subsection (c)(3) shall not apply to coal tar wastewater separators.

[SIP: Approved 2/24/97, 62 FR 8171, 40 CFR 52.220(c)(184)(i)(B)(6); Approved 1/21/81, 46 FR 5965; 40 CFR 52.220(c)(69)(i), Approved 9/8/78, 43 FR 40011, 40 CFR 52.220(c)(39)(ii)(C); Approved 6/14/78, 43 FR 25684, 40 CFR 52.220(c)(37)(i)(A)]

ANTELOPE VALLEY AIR POLLUTION CONTROL DISTRICT

RULE 468
Sulfur Recovery Units

(Adopted: 05/07/76; Amended: 10/08/76)

A person shall not discharge into the atmosphere from any sulfur recovery unit producing elemental sulfur, effluent process gas containing more than:

a. 500 ppm of sulfur compounds expressed as sulfur dioxide, calculated on a dry basis averaged over a minimum of 15 consecutive minutes.

b. 10 ppm of hydrogen sulfide averaged over a minimum of 15 consecutive minutes and calculated on a dry basis.

c. 90 kilograms (198.5 pounds) per hour of sulfur compounds expressed as sulfur dioxide. Any sulfur recovery unit having an effluent process gas discharge containing less than 5 kilograms (11.0 pounds) per hour of sulfur compounds expressed as sulfur dioxide may dilute to meet the provision of subsection (a) above until October 1, 1976.

[SIP: Approved 9/8/78, 43 FR 40011, 40 CFR 52.220(c)(39)(ii)(C); Approved 6/14/78, 43 FR 25684, 40 CFR 52.220(c)(37)(i)(A)]

ANTELOPE VALLEY AIR POLLUTION CONTROL DISTRICT

RULE 470
Asphalt Air Blowing

(Adopted: 05/07/76)

A person shall not operate or use any equipment for the air blowing of asphalt unless all gases, vapors and gas-entrained effluents from such equipment are:

a. Incinerated at temperatures of not less than 760oC (1400oF) for a period of not less than 0.3 second, or

b. Processed in such a manner determined by the Air Pollution Control Officer to be equally, or more, effective for the purpose of air pollution control than subsection (a).

[SIP: Approved 9/8/78, 43 FR 40011, 40 CFR 52.220(c)(39)(iii)(C); Approved 6/14/78, 43 FR 25684, 40 CFR 52.220(c)(37)(i)(A)]

ANTELOPE VALLEY AIR POLLUTION CONTROL DISTRICT

RULE 472
Reduction Of Animal Matter

(Adopted: 05/07/76)

(a) A person shall not operate or use any equipment for the reduction of animal matter unless all gases, vapors and gas-entrained effluents from such equipment are:

1. Incinerated at temperatures of not less than 650oC (1202oF) for a period of not less than 0.3 second, or

2. Processed in such a manner determined by the Air Pollution Control Officer to the equally, or more, effective for the purpose of air pollution control than (1) above.

(b) A person incinerating or processing gases, vapors or gas-entrained effluents pursuant to this rule shall provide, properly install and maintain in calibration, in good working order and in operation, devices, as specified by the Air Pollution Control Officer, for indicating temperature, pressure or other operating conditions.

(c) The provisions of this rule shall not apply to any equipment used exclusively for the processing of food for human consumption.

[SIP: Approved 9/8/78, 43 FR 40011, 40 CFR 52.220(c)(39)(iii)(C); Approved 6/14/78, 43 FR 25684, 40 CFR 52.220(c)(37)(i)(A)]

ANTELOPE VALLEY AIR POLLUTION CONTROL DISTRICT

RULE 474
Fuel Burning Equipment - Oxides Of Nitrogen

(Adopted 05/07/76; Amended: 10/08/76; Amended 12/04/81)

(a) A person shall not discharge into the atmosphere from any non-mobile fuel burning equipment, oxides of nitrogen, expressed as nitrogen dioxide (NO2), calculated at three percent oxygen on a dry basis averaged over a minimum of 15 consecutive minutes, in excess of the concentrations shown in the following table:

(b) A person shall not discharge into the atmosphere from steam generating equipment, oxides of nitrogen dioxide (NO2), calculated at three percent oxygen on dry basis averaged over a minimum of 15 minutes, in excess of the concentrations shown in the following table:

The provisions of this subsection shall be effective only in San Bernardino and Riverside Counties.

(c) When more than one type of fuel is used, the allowable concentration shall be determined by proportioning the gross heat input for each fuel to its respective allowable concentration.

(d) Notwithstanding the provisions of subsection (a), a person operating a supercritical steam generating unit with a maximum gross heat input exceeding 2143 million BTUs per hour may discharge oxides of nitrogen into the atmosphere not to exceed 400 ppm calculated at three percent oxygen on a dry basis averaged over a minimum of 15 consecutive minutes during the pressure ramp periods of the boiler startup operations.

(e) For the purpose of this rule:

1. FUEL BURNING EQUIPMENT shall be comprised of the minimum numbers of boilers, furnaces, jet engines or other fuel burning equip-ment, the simultaneous operations of which are required for the produc-tion of useful heat or power.
2. A SUPERCRITICAL STEAM GENERATING UNIT is a steam boiler which normally operates above the water critical temperature (705oF) and critical pressure (3210 psia) where water can exist only in the gaseous phase.

3. PRESSURE RAMPS are two steam pressure build-up periods, after a heat-soak period at 400 psia in the startup of a supercritical steam generating unit:
    A. Low pressure, 400 psia to 1000 psia, and
    B. High pressure, 1000 psia to 3500 psia.

[SIP: Submitted as amended 12/4/81 on 11/26/96; Approved _____, _____, 40 CFR 52.220(c)(121)(i)(A); approved 9/8/78, 43 FR 40011, 40 CFR 52.220(c)(39)(iii)(C); Approved 6/14/78, 43 FR 25684, 40 CFR 52.220(c)(37)(i)(A)]

ANTELOPE VALLEY AIR POLLUTION CONTROL DISTRICT

RULE 476
Steam Generating Equipment

(Adopted May 7, 1976)(Amended October 8, 1976)

(a) A person shall not discharge into the atmosphere from any equipment having a maximum heat input rate of more than 12.5 million kilogram calories (50 million BTU) per hour used to produce steam, for which a permit to build, erect, install or expand is required after May 7, 1976, air contaminants that exceed the following:

1. Oxides of nitrogen, expressed as nitrogen dioxide (NO2), calculated at three percent oxygen on a dry basis averaged over a minimum of 15 minutes, as shown in the following table:

Fuel	Gas	Liquid or Solid
Concentration	125 ppm NO_x	225 ppm NO_x

   When more than one type of fuel is used, the allowable concentration shall be determined by proportioning the gross heat input and allowable concentration of each fuel.

2. Combustion contaminants that exceed both of the following two limits:

   A. 5 kilograms (11 pounds) per hour.

   B. 23 milligrams per cubic meter (0.01 gr/SCF) calculated at three percent oxygen on a dry basis averaged over a minimum of 15 consecutive minutes.

(b) Nothing in this rule shall be construed as preventing the maintenance or preventing the alteration or modification of existing steam generating equipment which will not increase the mass rate of air contaminant emissions.

[SIP: Submitted as amended 10/8/76 on 11/26/96; Approved 9/8/78, 43 FR 40011, 40 CFR 52.220(c)(39)(ii)(C); Approved 6/14/78, 43 FR 25684, 40 cFR 52.220(c)(37)(i)(A)]

ANTELOPE VALLEY AIR POLLUTION CONTROL DISTRICT

RULE 481
Spray Coating Operations

(Adopted: 10/07/77; Amended: 12/02/77; Amended: 05/05/78)

(a) A person shall not use or operate any spray painting or spray coating equipment unless one of the following conditions is met:

1. The spray coating equipment is operated inside a control enclosure which is approved by the Executive Officer. Any control enclosure for which an application for permit for new construction, alteration, or change of ownership or location is submitted after the date of adoption of this rule shall be exhausted only through filters at a design face ve-locity not less than 100 feet per minute nor greater than 300 feet per minute, or through a water wash system designed to be equally effective for the purpose of air pollution control.

2. Coatings are applied with electrostatic and/or airless spray equipment.

3. A method of application or control is used which has an effectiveness equal to or greater than the equipment specified in subsection (a)(1) or (a)(2) of this rule.

(b) The provisions of this rule shall not apply to:

1. Spray coating of three gallons per day or less of coatings at a single location.

2. Spray coating of a dwelling and its appurtenances by the owner or occupant of a four-family dwelling or less.

3. Spray coating of lacquers on cabinets and wood and simulated-wood surfaces adhesives, fibrous coatings, abrasive materials, portland cement mixtures, elastomers, stains, metal surface primers, or textured coatings, provided such spray coating cannot be conducted inside a control enclosure.

4. Spray coating for construction or maintenance purposes of: structural steel; pipes, valves and flanges six inches in diameter or less; ornamental objects on buildings, structures and their appurtenances; or aircraft ground support equipment which cannot fit inside of a spray enclosure with effective internal dimensions of 10'W x 25'L x 8'H.

5. Spray coating of catalyzed epoxy or polyurethane primers or coatings on large aerospace subassemblies or completed vehicles where the stage of assembly precludes placement inside a control enclosure.

6. Any control enclosure connected to an external air pollution control device with a control efficiency equivalent to the filters specified in subsection (a)(1) of this rule and which has been approved by the Executive Officer.

[SIP: Approved 1/21/81, 46 FR 5965, 40 CFR 52.220(c)(47)(i)(B)]

ANTELOPE VALLEY AIR POLLUTION CONTROL DISTRICT

Rule 1102.
Petroleum Solvent Dry Cleaners

(Adopted January 6, 1978)(Amended August 3, 1979)
(Amended July 11, 1980) (Amended August 3, 1990)(Amended December 7, 1990)

(a) Definitions

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

(1) CONSUMED SOLVENT is the amount of solvent purchased and emitted to the atmosphere in that year.

(2) EXEMPT COMPOUNDS are any of the following compounds which have been determined to be non-precursors of ozone:

(A) Group I (General)

chlorodifluoromethane (HCFC-22)

dichlorotrifluoroethane (HCFC-123)

tetrafluoroethane (HFC-134a)

dichlorofluoroethane (HCFC-141b)

chlorodifluoroethane (HCFC-142b)

(B) Group II (Under Review)

methylene chloride

1,1,1-trichloroethane (methyl chloroform)

trifluoromethane (CFC-23)

trichlorotrifluoroethane (CFC-113)

dichlorodifluoromethane (CFC-12)

trichlorofluoromethane (CFC-11)

dichlorotetrafluoroethane (CFC-114)

chloropentafluoroethane (CFC115)

The Group II compounds may have restictions on their use because they are toxic or potentially toxic, upper atmosphere ozone depleters, or cause other environmental impacts. The District Board has adopted a policy which states that chlorofluorocarbons (CFC) will be phased out at the earliest practicable date on or before 1997.

(3)PETROLEUM SOLVENT is a petroleum distillate that exists as a liquid under standard conditions.

(4) PETROLEUM SOLVENT DRY CLEANING FACILITY is any facility engaged in the cleaning of fabrics or

leather using petroleum solvent. The facility includes, but is not limited to, washers, extractors, dryers, filters, purification systems, waste disposal systems, holding tanks, pumps, and attendant piping and valves.

(5) SOLVENT RECOVERY DRYER is a class of dry-cleaning dryers that employs a condenser to liquefy and recover solvent vapors evaporated in a closed-loop, recirculating stream of air.

(6) TRANSFER CART is a cart or container used for the transfer of wet fabrics from the washer to the dryer that has a lid and walls which are impervious to the solvent, and is equipped with drains that drain solvent into closed containers.

(7) VOLATILE ORGANIC COMPOUND (VOC) is any chemical compound containing the element carbon, excluding carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates, ammonium carbonate, methane, and exempt compounds.

(b) Operating Requirements

A person shall not operate any petroleum solvent dry-cleaning facility unless:

(1) there is no liquid leaking in a continuous flow, or in a visible mist, or at the rate of three drops per minute or more from any portion of the equipment.

(2) all washer lint traps, button traps, access doors, and other parts of the equipment where solvent may be exposed to the atmosphere are kept closed at all times except when required for proper operation or maintenance.

(3) the still residue is stored in sealed containers.

(4) the dry-cleaning facility is equipped with one of the following filtering systems:

(A) cartridge filters containing paper or carbon or a combination thereof, which are fully drained in the filter housing for at least 12 hours before removal; or

(B) any other type of filtering system or process that reduces the VOC content in all filtration wastes to 1.0 kilogram or less per 100 kilograms dry weight of articles dry-cleaned before disposal.

(5) articles which have been dry-cleaned are transferred to the dryer within five minutes after they are removed from the washer, or are stored in closed transfer carts.

(6) all solvents are stored in closed containers.

(7) the solvent recovery dryer remains closed and the recovery phase continues until there is no visible flow in the sight glass of the condenser for at least one minute.

(8) all petroleum solvent leaks are repaired within three working days.

(c) Control Equipment Requirements

A person shall not operate any petroleum solvent dry-cleaning facility unless:

(1)overall solvent consumption is less than 4.5 kilograms per 100 kilograms of articles dry-cleaned for those facilities that do not have a still, or 6.5 kilograms per 100 kilograms of articles dry-cleaned for those facilities that do have a still; and

(2)a solvent recovery dryer or an equivalent control device that reduces VOC emissions from drying tumblers and cabinets by at least 90 percent by weight is installed.

(d) Recordkeeping Requirements

(1) The owner or operator shall maintain records of:

(A) pre-washed weight of articles,

(B) all solvent purchases and inventory of solvent.

(2) All records shall be maintained pursuant to Rule 109.

(e) Test Methods

EPA Test Method 25 or SCAQMD Test Method 25.1 (March 1989), shall be used to determine compliance with this rule. Emissions determined to exceed limits established by this rule through the use of either of the above referenced test methods shall constitute a violation of this rule.

(f) Compliance Schedule

(1) All petroleum solvent dry-cleaning facilities consuming more than 10,000 liters (2,642 gallons) of solvent per year shall comply with the provisions of this rule.

(2) Effective January 1, 1992, petroleum solvent dry-cleaning facilities consuming more than 5,000 liters (1,320 gallons) of solvent per year shall comply with the provisions of this rule.

(3) Effective January 1, 1993 all petroleum solvent dry-cleaning facilities shall comply with the provisions of this rule.

(g) Increments of Progress

In order to comply with the compliance dates specified in paragraph (f), an owner or operator of a petroleum solvent dry-cleaning facility shall comply with the following increments of progress schedule.

(1) Twelve months prior to the effective dates, submit to the Executive Officer an application for Permit to Construct, describing at a minimum, the steps that will be taken to achieve compliance with the provision of paragraph (c) of this rule.

(2) Eight months prior to the effective dates, initiate on-site construction or installation of the equipment to reduce or control emissions.

(3) Upon the effective dates, complete on-site construction or installation of equipment to reduce or control emissions, and assure final compliance with the provisions of paragraph (c) of this rule.

10-25-91

(Adopted April 7, 1978)(Amended December 7, 1984)(Amended May 5, 1989)
(Amended March 2, 1990)(Amended December 7, 1990)(Amended March 1, 1991)

RULE 1104. WOOD FLAT STOCK COATING OPERATIONS

(a) Applicability

This rule applies to all persons applying coatings, inks, and adhesives to wood flat stock for the purpose of manufacturing a finished wood panel intended for attachment to the inside walls of buildings, including, but not limited to, homes and office buildings, mobile homes, trailers, prefabricated buildings and similar structures, boats, and ships; or a finished exterior wood siding intended for use in construction.

(b) Definitions

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

(1) ADHESIVE is any substance that is capable of bonding surfaces together by attachment.

(2) CLEAR TOPCOAT means a coating which contains resins and binders but not opaque pigments, and which is specifically formulated to form a transparent or translucent solid protective film.

(3) COATING is a material which is applied to a surface and which forms a film in order to beautify and/or protect such surface, which includes, but is not limited to, water repellent preservatives, semitransparent stains, opaques stains, filler, and clear top coat.

(4) DIP COATER is to dip an object into a vat of coating material and drain off any excess coating.

(5) ELECTROSTATIC APPLICATION is charging of atomized paint droplets for deposition by electrostatic attraction.

(6) EXEMPT COMPOUNDS are any of the following compounds that have been determined to be non-precursors of ozone:

(A) Group I (General)

chlorodifluoromethane (HCFC-22)
dichlorotrifluoroethane (HCFC-123)
tetrafluoroethane (HFC-134a)
dichlorofluoroethane (HCFC-141b)
chlorodifluoroethane (HCFC-142b)

(B) Group II (Under Review)

methylene chloride
1,1,1-trichloroethane (methyl chloroform)
trifluoromethane (FC-23)
trichlorotrifluoroethane (CFC-113)
dichlorodifluoromethane (CFC-12)
trichlorofluoromethane (CFC-11)
dichlorotetrafluoroethane (CFC-114)
chloropentafluoroethane (CFC-115)

The Group II compounds may have restrictions on their use because they are toxic or potentially toxic, or upper-atmosphere ozone depleters, or cause other environmental impacts. The District Board has adopted a policy which states that chlorofluorocarbons (CFC) will be phased out at the earliest practicable date on or before 1997.

(7) EXTERIOR WOOD SIDING is a wood or wood-containing board having a flat surface for use in commercial or residential construction, generally as a covering for an outside wall.

(8) FILLER is a semisolid viscous material used to fill voids.

(9) FLOW COATER is to coat an object by flowing a stream of coating over an object and draining off any excess coating.

(10) GRAMS OF VOC PER LITER OF COATING, ADHESIVES, OR INKS, LESS WATER AND LESS EXEMPT COMPOUNDS is the weight of VOC per combined volume of VOC and coating solids, and can be calculated by the following equation:

$$\text{Grams of VOC per Liter of Coating, Adhesives, or Inks, Less Water and Less Exempt Compounds} = \frac{W_s - W_w - W_{es}}{V_m - V_w - V_{es}}$$

Where:
W_s = weight of volatile compounds in grams
W_w = weight of water in grams
W_{es} = weight of exempt compounds in grams
V_m = volume of material in liters
V_w = volume of water in liters
V_{es} = volume of exempt compounds in liters

(11) HAND APPLICATION METHODS is the application of coatings, sealants, or adhesives by manually held, non-mechanically-operated

equipment. Such equipment includes paint brushes, hand rollers, caulking guns, trowels, spatulas, syringe daubers, rags, and sponges.

(12) HIGH-VOLUME, LOW-PRESSURE (HVLP) SPRAY EQUIPMENT is used to spray a coating by means of a gun that operates between 0.1 and 10 pounds per square inch gauge (psig) air pressure.

(13) INK is any fluid or viscous composition used in printing, impressing, or transferring an image onto a panel.

(14) OPAQUE STAINS are all stains not classified as semitransparent stains.

(15) PANEL is a flat piece of wood or wood-containing products, usually rectangular, and is attached to the inside walls of homes, office buildings, mobile homes, trailers, prefabricated buildings and similar structures, boats, and ships.

(16) PERSON is any firm, business establishment, association, partnership, corporation, or individual, whether acting as principal, agent, employee, or other capacity, including any governmental entity or charitable organization.

(17) ROLL COATER is a series of mechanical rollers that forms a thin coating film on the surface of roller, which is applied to a substrate by moving the substrate underneath the roller.

(18) SEMITRANSPARENT STAINS are coatings which are formulated to change the color of a surface but not conceal the surface.

(19) VOLATILE ORGANIC COMPOUND (VOC) is any volatile chemical compound that contains the element carbon, excluding methane, carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates, ammonium carbonate, and exempt compounds.

(20) WATER-REPELLENT PRESERVATIVE is a penetrating coating designed to protect bare wood from mildew, decay, insect attack, and water staining.

(21) WOOD FLAT STOCK is defined as wood panels and exterior wood siding, which include, by way of illustration and not limitation, redwood, cedar or plywood stocks, plywood panels, particle boards, composition hard boards, and any other panels or siding constructed of solid wood or a wood-containing product.

(c) Requirements

Any person applying a coating, ink, or adhesive to wood flat stock shall comply with all of the following requirements:

(1) Process Requirements

(A) Use only wood flat stock coatings and adhesives for wood panels which contain no more than 250 grams of volatile organic compounds per liter of coating or adhesive, less water and exempt compounds (2.1 pounds per gallon).

(B) Use only wood flat stock inks for wood panels which contain no more than 300 grams of volatile organic compounds per liter of ink, less water and exempt compounds (2.5 pounds per gallon).

(C) Use only wood flat stock coatings for exterior wood siding, which contain no more than 350 grams of volatile organic compounds per liter of coating, less water and exempt compounds (2.9 pounds per gallon).

(2) Application Methods

On or after January 1, 1992, no owner or operator shall apply coatings, adhesives, or inks unless these materials are applied with properly operating equipment, according to operating procedures specified by the equipment manufacturer or the Executive Officer or his designee, and by the use of one of the following methods:

(i) Flow Coater, Roll Coater, or Dip Coater; or

(ii) Hand Application Methods; or

(iii) High-Volume, Low Pressure (HVLP) or Electrostatic Application

(3) Control Equipment Requirements

Any person owning or operating control equipment system, in association with a wood flat stock coating operation, may comply with provisions of subparagraph (c)(1) by using approved control equipment system provided that the VOC emissions from such operations or materials, or both, are reduced in accordance with the following provisions:

(A) The control device shall reduce emissions from an emission collection system by at least 95 percent, by weight, or the output of the air pollution control device is less than 50 ppm calculated as carbon.

(B) The emission collection system shall collect at least 90 percent, by weight, of the emissions generated by the sources of emissions.

(d) Recordkeeping Requirements

Notwithstanding provisions of paragraph (g), records shall be maintained pursuant to Rule 109 - Recordkeeping for Volatile Organic Compound Emissions.

(e) Compliance Test Methods

(1) The VOC content of materials subject to the provisions of this rule shall be determined by EPA Reference Method 24 (Determination of Volatile Matter Content, Water Content, Density Volume Solids, and Weight Solids of Surface Coatings, Code of Federal Regulations Title 40, Part 60, Appendix A). The exempt compounds' content shall be determined by SCAQMD Laboratory Methods of Analysis for Enforcement Samples - Section III, Method 22.

(2) The efficiency of the control device and the VOC content measured and calculated as carbon in the control device exhaust gases shall be determined by EPA Test Methods 25 and 25A, or SCAQMD Method 25.1 (March 1989) (Determination of Total Gaseous Non-Methane Organic Emissions as Carbon).

(3) The collection efficiency of the fugitive emissions will be determined pursuant to EPA's "Guidelines For Developing Capture Efficiency Protocols."

~~(e)~~(f) Alternative Emission Control Plan

Any person may achieve compliance with requirements of paragraph (c) by means of an Alternative Emission Control Plan pursuant to Rule 108 - Alternative Emission Control Plans.

(g) Exemptions

(1) Laminating of fiberglass, metal, or plastic sheets to wood panels that is subject to the provisions of Rule 1168 - Control of Volatile Organic Compound Emissions from Adhesive Application.

(2) Coating of wood panels for furniture end use that is subject to the provisions of Rule 1136 - Wood Products Coatings.

(3) Coating of wood panels for aircraft that is subject to the provisions of Rule 1124 - Aerospace Assembly and Component Manufacturing Operations.

9.14.92

(Adopted May 1, 1992)

RULE 1106.1. PLEASURE CRAFT COATING OPERATIONS

(a) Applicability

This rule is applicable to all coating operations of pleasure craft, as defined in paragraph (b)(12) of this rule, or their parts and components, for the purpose of refinishing, repairing, modification, or manufacturing such craft. This rule shall also apply to establishments engaged in activities described in the United States Office of Management and Budget's 1987 Standard Industrial Classification Manual, under Standard Industrial Classification (SIC) codes 3732 - Boat Building and Repairing and 4493 - Marinas. Pleasure craft coating operations which are subject to the requirements of this rule shall not be subject to the requirements of Rule 1106 - Marine Coating Operations.

(b) Definitions

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

(1) AEROSOL COATING is a hand-held, nonrefillable container which expels pressurized product ingredients by means of a propellant.

(2) ANTIFOULANT COATING is any coating applied to the underwater portion of a pleasure craft to prevent or reduce the attachment of biological organisms, and registered with the United States Environmental Protection Agency (EPA) as a pesticide under the Federal Insecticide, Fungicide, and Rodenticide Act (7 United States Code Section 136).

(3) CLEAR WOOD FINISHES are clear and semi-transparent topcoats applied to wood substrates to provide a transparent or translucent film.

(4) EXEMPT COMPOUNDS are any of the following compounds:

(A) Group I (General)

chlorodifluoromethane (HCFC-22)
trifluoromethane (HFC-23)
dichlorotrifluoroethane (HCFC-123)
2-chloro-1,1,1,2-tetrafluoroethane (HCFC-124)
pentafluoroethane (HFC-125)
1,1,1,2-tetrafluoroethane (HCFC-134)
tetrafluoroethane (HFC-134a)
dichlorofluoroethane (HCFC-141b)
chlorodifluoroethane (HFC-142b)

1,1,1-trifluoroethane (HCFC-143a)
1,1-difluoroethane (HFC-152a)
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
sulfur-containing perfluorocarbons with no unsaturations and with sulfur bonds only to carbon and fluorine

(B) Group II

methylene chloride
1,1,1-trichloroethane (TCA or methyl chloroform)
trichlorofluoromethane (CFC-11)
dichlorodifluoromethane (CFC-12)
trichlorotrifluoroethane (CFC-113)
dichlorotetrafluoroethane (CFC-114)
chloropentafluoroethane (CFC-115)

Use of Group II compounds or carbon tetrachloride may be restricted in the future because they are either toxic, potentially toxic, or are upper atmospheric ozone depleters, or cause other environmental impacts. Specifically, the District Board has established a policy to phase out chlorofluorocarbons (CFC) on or before 1997.

(5) EXTREME HIGH GLOSS COATING is any coating which achieves at least 95 percent reflectance on a 60° meter when tested by ASTM Method D 523-89.

(6) FINISH PRIMER/SURFACER is a coating applied with a wet film thickness of less then 10 mils prior to the application of a topcoat for purposes of providing corrosion resistance, adhesion of subsequent coatings, a moisture barrier, or promotion of a uniform surface necessary for filling in surface imperfections.

(7) GRAMS OF VOC PER LITER OF COATING, LESS WATER AND LESS EXEMPT COMPOUNDS is the weight of VOC per combined volume of VOC and coating solids and which is calculated by the following equation:

$$\text{Grams of VOC per Liter of Coating, Less Water and Less Exempt Compounds} = \frac{W_s - W_w - W_{es}}{V_m - V_w - V_{es}}$$

Where: W_s = weight of volatile compounds in grams
W_w = weight of water in grams
W_{es} = weight of exempt compounds in grams
V_m = volume of material in liters
V_w = volume of water in liters
V_{es} = volume of exempt compounds in liters

(8) HAND-APPLICATION METHODS are the methods used to apply coating to substrate by manually held, non-mechanically operated equipment. Such equipment includes, but is not limited to, paint brushes, hand rollers, caulking guns, trowels, spatulas, syringe daubers, rags, and sponges.

(9) HIGH BUILD PRIMER/SURFACER is a coating applied with a wet film thickness of 10 mils or more prior to the application of a topcoat for purposes of providing corrosion resistance, adhesion of subsequent coatings, or a moisture barrier, or promoting a uniform surface necessary for filling in surface imperfections.

(10) HIGH GLOSS COATING is any coating which achieves at least 85 percent reflectance on a 60° meter when tested by ASTM D 523-89.

(11) HIGH-VOLUME, LOW PRESSURE (HVLP) SPRAY is a coating application system which is operated between 0.1 and 10 pounds per square inch gauge (psig) flow pressure at the air cap/tip of the spray gun.

(12) PLEASURE CRAFT are vessels which are manufactured or operated primarily for recreational purposes, or leased, rented, or chartered to a person or business for recreational purposes. The owner or operator of such vessels shall be responsible for certifying that the intended use is for recreational purposes.

(13) PLEASURE CRAFT COATING is any marine coating, except unsaturated polyester resin (fiberglass) coatings, applied by brush, spray, roller, or other means to pleasure craft.

(14) PRETREATMENT WASH PRIMER is a coating which contains no more than 12 percent solids, by weight, and at least 1/2 percent acids, by weight; is used to provide surface etching; and is applied directly to fiberglass and metal surfaces to provide corrosion resistance and adhesion of subsequent coatings.

(15) SEALER is a low viscosity coating applied to bare wood to seal surface pores to prevent subsequent coatings from being absorbed into the wood.

(16) TEAK PRIMER is a coating applied to teak or previously oiled decks in order to improve the adhesion of a seam sealer to wood.

(17) TOPCOAT is any final coating applied to the interior or exterior of a pleasure craft.

(18) VARNISHES are clear wood topcoats formulated with various resins to dry by chemical reaction on exposure to air.

(19) VOLATILE ORGANIC COMPOUND (VOC) is any volatile compound which contains the element carbon, excluding methane, carbon dioxide, carbon monoxide, carbonic acid, metallic carbides or carbonates, ammonium carbonate, and exempt compounds.

(c) Requirements

(1) VOC Content

(A) Within the District, a person shall not sell, offer for sale, solicit, apply, or require any other person to use in the District any pleasure craft coating with a VOC content in excess of the following limits, expressed as grams of VOC per liter of coating applied, less water and exempt solvents:

COATING	VOC LIMIT		
	On or After 4/6/92	On or After 9/1/92	On or After 7/1/94
Topcoats			
Extreme High Gloss		650	490
High Gloss	420	420	420
Pretreatment Wash Primers	780	780	780
Finish Primer/Surfacer		600	420
High Build Primer Surfacer		420	340

COATING	VOC LIMIT		
	On or After 4/6/92	On or After 9/1/92	On or After 7/1/94
Teak Primer		775	775
Antifoulant Coatings			
Aluminum Substrate		560	560
Other Substrates	440	400	150
Clear Wood Finishes			
Sealers		550	550
Varnishes		490	490
Others		420	420

In the case of any coating sold, offered for sale, or solicited for use, this prohibition shall only apply where it is designated anywhere on the container by any sticker or label affixed thereto, or where it is indicated in any sales or advertising literature, that the coating may be used as, or is suitable for use as, a pleasure craft coating.

(B) This section shall not apply to pleasure craft coatings sold, offered for sale, or solicited, for shipment or use outside of this District or for shipment to other manufacturers for repackaging.

(2) On or after July 1, 1993, a person shall not apply coatings subject to this rule unless the coating is applied by use of one of the following methods:

(A) Hand Application Methods, or

(B) High Volume, Low Pressure (HVLP) Spray, or

(C) such other alternative spray application method as is demonstrated, in accordance with the provisions of paragraph (e)(2), to be capable of achieving equivalent or better transfer efficiency than the application method listed in subparagraph (c)(2)(B), and for which written approval of the District's Executive Officer has been obtained to use this method.

(3) Prior to September 1, 1994, the sale or application of a coating which fails to meet the VOC limits set forth in paragraph (c)(1) shall not constitute a violation of that paragraph, provided that it is manufactured more than 90 days prior to September 1, 1992. Further, it shall not constitute a violation

of paragraph (c)(1) for any coating to be sold or applied prior to July 1, 1996, provided that it is manufactured more than 90 days prior to July 1, 1994, and the coating meets the VOC limits applicable as of September 1, 1992. This subparagraph does not apply to any coating which fails to display on the product container or package the date on which the product was manufactured, or a code indicating such date. The manufacturer of coatings supplied in containers using a coded dating system shall file with the District's Executive Officer an explanation of each code.

(4) On or after July 1, 1992, solvent cleaning of coating application equipment referenced in paragraph (c)(2), parts, products, tools, machinery, equipment, and general work areas, and the storage and disposal of VOC-containing materials used in solvent cleaning operations, shall be carried out in accordance with Rule 1171 (Solvent Cleaning Operations).

(5) On and after January 1, 1997, a person shall not apply pleasure craft coatings subject to the requirements of this rule with a coating containing carbon tetrachloride or any of the Group II exempt compounds listed in subparagraph (b)(4)(B) except methylene chloride.

(d) Recordkeeping Requirement

Records shall be maintained in accordance with Rule 109.

(e) Compliance Test Methods

For purposes of this rule, the following test methods shall be used:

(1) VOC Content

(A) The VOC content of coatings shall be determined by:

(i) EPA Reference Method 24, (40 Code of Federal Regulations, Part 60, Appendix A). The exempt solvent content shall be determined by SCAQMD Method 19 and 22 (SCAQMD "Laboratory Method of Analysis for Enforcement Samples" manual); or

(ii) SCAQMD Methods 16 - Determination of Volatile Organic Compounds (VOC) in Various Materials, 17 - Density of Paint, Varnish, Lacquer and Related Products, 19 - Determination of Exempt Compounds, 22 - Distillation of Solvents from Paints,

Coatings and Inks, and 24 - Water in Paints and Paint Materials by Karl Fisher Method (SCAQMD "Laboratory Method of Analysis for Enforcement Samples" manual).

(B) VOC content determined to exceed the limits established by this rule through the use of any of the above-referenced test methods shall constitute a violation of this rule.

(2) Transfer Efficiency Demonstration

Compliance with subparagraph (c)(2)(C) shall be determined by the procedures described in SCAQMD's "Spray Equipment Transfer Efficiency Test Procedure For Equipment User, May 24, 1989."

(3) Acid Content in Coatings

The percent acid by weight of pretreatment wash primers shall be determined by ASTM D 1613-85 - Acidity in Volatile Solvents and Chemical Intermediates Used in Paints, Varnishes, Lacquers, and Related Products.

(4) The following classes of 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 sulfur bonds only to carbon and fluorine, will be analyzed as exempt compounds for compliance with subdivision (c), only at such time as manufacturers specify which individual compounds are used in the coating formulations and identify the test methods, which prior to such analysis, have been approved by the USEPA and the SCAQMD, that can be used to quantify the amounts of each exempt compound.

(f) Exemptions

(1) The provisions of this rule shall not apply to the use of aerosol coatings.

(2) Prior to July 1, 1996, the provisions of paragraphs (c)(1) and (c)(3) shall not apply to the sale of separate reactive resins, commonly known as catalysts.

6/16/95

(Adopted June 1, 1979)(Amended December 4, 1981)(Amended May 7, 1982)
(Amended December 2, 1983)(Amended March 2, 1984)(Amended January 9, 1987)
(Amended June 5, 1987)(Amended May 5, 1989)(Amended March 2, 1990)
(Amended November 2, 1990)(Amended August 2, 1991)(Amended May 12, 1995)

RULE 1107. COATING OF METAL PARTS AND PRODUCTS

(a) Purpose and Applicability

The purpose of Rule 1107 is to reduce volatile organic compound (VOC) emissions from the coating of metal parts and products. This rule applies to all metal coatings operations except those performed on aerospace assembly, magnet wire, marine craft, motor vehicle, metal container, and coil coating operations.

(b) Definitions

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

(1) AIR-DRIED COATING is a coating that is cured at a temperature below 90°C (194°F).

(2) BAKED COATING is a coating that is cured at a temperature at or above 90°C (194°F).

(3) CAMOUFLAGE COATING is a coating used, principally by the military, to conceal equipment from detection.

(4) CAPTURE EFFICIENCY is the percentage of volatile organic compounds used, emitted, evolved, or generated by the operation, that are collected and directed to an air pollution control device.

(5) COATING is a material which is applied to a surface and which forms a continuous film in order to beautify and/or protect such surface.

(6) CONTRACT PAINTER is a non-manufacturer of metal parts and products who applies coatings to such products at his facility exclusively under contract with one or more parties that operate under separate ownership and control.

(7) ELECTRIC-INSULATING VARNISH is a non-convertible-type coating applied to electric motors or components of electric motors.

(8) ETCHING FILLER is a coating that contains less than 23 percent solids by weight and at least 1/2-percent acid by weight, and is used instead of applying a pretreatment coating followed by a primer.

(9) EXEMPT COMPOUNDS are any of the following compounds:

6/16/95

(A) Group I
trifluoromethane (HFC-23)
chlorodifluoromethane (HCFC-22)
dichlorotrifluoroethane (HCFC-123)
2-chloro-1,1,1,2-tetrafluoroethane (HCFC-124)
pentafluoroethane (HFC-125)
1,1,2,2-tetrafluoroethane (HFC-134)
tetrafluoroethane (HFC-134a)
dichlorofluoroethane (HCFC-141b)
chlorodifluoroethane (HCFC-142b)
1,1,1-trifluoroethane (HFC-143a)
1,1-difluoroethane (HFC-152a)
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
sulfur-containing perfluorocarbons with no unsaturations and with sulfur bonds only to carbon and fluorine

(B) Group II
methylene chloride
1,1,1-trichloroethane (methyl chloroform)
trifluoromethane (FC-23)
trichlorotrifluoroethane (CFC-113)
dichlorodifluoromethane (CFC-12)
trichlorofluoromethane (CFC-11)
dichlorotetrafluoroethane (CFC-114)
chloropentafluoroethane (CFC-115)

The use of Group II compounds and/or carbon tetrachloride may be restricted in the future because they are toxic, potentially toxic, upper-atmosphere ozone depleters, or cause other environmental impacts. The Group II compounds may have restrictions on their use because they are toxic or potentially toxic, or are upper-atmosphere ozone depleters, or cause other environmental impacts. By January 1, 1996, production of chlorofluorocarbons (CFC), 1,1,1-trichloroethane (methyl chloroform), and carbon tetrachloride will be phased out in accordance with the Code of Federal Regulation Title 40, Part 82 (December 10, 1993).

6/16/95

(10) EXTREME HIGH-GLOSS COATING is a coating which, when tested by the American Society for Testing Material Test Method D-523 adopted in 1980, shows a reflectance of 75 or more on a 60° meter.

(11) EXTREME-PERFORMANCE COATING is a coating used on a metal surface where the coated surface is, in its intended use subject to the following:

(A) Chronic exposure to corrosive, caustic or acidic agents, chemicals, chemical fumes, chemical mixtures or solution; or

(B) Repeated exposure to temperatures in excess of 250° F; or

(C) Repeated heavy abrasion, including mechanical wear and repeated scrubbing with industrial grade solvents, cleansers or scouring agents.

(12) GRAMS OF VOC PER LITER OF COATING LESS WATER AND LESS EXEMPT COMPOUNDS is the weight of VOC per combined volume of VOC and coating solids and can be calculated by the following equation:

Grams of VOC per Liter of Coating Less Water and Less Exempt Compounds $= \dfrac{W_s - W_w - W_{es}}{V_m - V_w - V_{es}}$

Where: W_s = weight of volatile compounds in grams
W_w = weight of water in grams
W_{es} = weight of exempt compounds in grams
V_m = volume of material in liters
V_w = volume of water in liters
V_{es} = volume of exempt compounds in liters

(13) GRAMS OF VOC PER LITER OF MATERIAL is the weight of VOC per volume of material and can be calculated by the following equation:

Grams of VOC per Liter of Material $= \dfrac{W_s - W_w - W_{es}}{V_m}$

Where: W_s = weight of volatile compounds in grams
W_w = weight of water in grams
W_{es} = weight of exempt compounds in grams
V_m = volume of material in liters

(14) HAND APPLICATION METHODS is the application of coatings by manually held nonmechanically operated equipment. Such equipment includes paint brushes, hand rollers, caulking guns, trowels, spatulas, syringe daubers, rags, and sponges.

(15) HEAT-RESISTANT COATING is a coating that must withstand a temperature of at least 400°F during normal use.

(16) HIGH-PERFORMANCE ARCHITECTURAL COATING is a coating used to protect architectural subsections and which meets the requirements of the Architectural Aluminum Manufacturer Association's publication number AAMA 605.2-1980.

(17) HIGH-TEMPERATURE COATING is a coating that is certified to withstand a temperature of 1000°F for 24 hours.

(18) HIGH-VOLUME, LOW-PRESSURE (HVLP) SPRAY is a coating application system which is operated at air pressure between 0.1 and 10 pounds per square inch gauge (psig).

(19) INK is a fluid that contains dyes and/or colorants and is used to make markings but not to protect surfaces.

(20) MAGNETIC DATA STORAGE DISK COATING is a coating used on a metal disk which stores data magnetically.

(21) METAL PARTICLES are pieces of an elemental pure metal or a combination of elemental metals.

(22) METAL PARTS AND PRODUCTS are any components or complete units fabricated from metal, except those subject to the coating provisions of other source specific rules of Regulation XI.

(23) METALLIC COATING is a coating which contains more than 5 grams of metal particles per liter of coating, as applied.

(24) MILITARY SPECIFICATION COATING is a coating applied to metal parts and products and which has a paint formulation approved by a United States Military Agency for use on military equipment.

(25) MOLD-SEAL COATING is the initial coating applied to a new mold or repaired mold to provide a smooth surface which, when coated with a mold release coating, prevents products from sticking to the mold.

(26) MOTOR VEHICLE is a passenger car, light-duty truck, medium-duty vehicle, or heavy-duty vehicle as defined in Section 1902, Title 13, of the California Administrative Code.

(27) PAN-BACKING COATING is a coating applied to the surface of pots, pans, or other cooking implements that are exposed directly to a flame or other heating elements.

(28) PREFABRICATED ARCHITECTURAL COMPONENT COATINGS are coatings applied to metal parts and products which are to be used as an architectural structure

(29) PRETREATMENT COATING is a coating which contains no more than 12 percent solids by weight, and at least 1/2-percent acid, by weight, is used to provide surface etching, and is applied directly to metal surfaces to provide corrosion resistance, adhesion, and ease of stripping.

(30) REACTIVE DILUENT is a liquid which is a VOC during application and one in which, through chemical reaction such as polymerization, 20 percent or more of the VOC becomes an integral part of a finished coating.

(31) REPAIR COATING is a coating used to recoat portions of a product which has sustained mechanical damage to the coating following normal painting operations.

(32) SAFETY-INDICATING COATING is a coating which changes physical characteristics, such as color, to indicate unsafe conditions.

(33) SILICONE-RELEASE COATING is any coating which contains silicone resin and is intended to prevent food from sticking to metal surfaces such as baking pans.

(34) SOLAR-ABSORBENT COATING is a coating which has as its prime purpose the absorption of solar radiation.

(35) SOLID-FILM LUBRICANT is a very thin coating consisting of a binder system containing as its chief pigment material one or more of molybdenum disulfide, graphite, polytetrafluoroethylene (PTFE) or other solids that act as a dry lubricant between faying surfaces.

(36) STENCIL COATING is an ink or a coating which is rolled or brushed onto a template or stamp in order to add identifying letters and/or numbers to metal parts and products.

(37) TEXTURED FINISH is a rough surface produced by spraying large drops of coating onto a previously applied coating.

(38) TOUCH-UP COATING is a coating used to cover minor coating imperfections appearing after the main coating operation.

(39) TRANSFER EFFICIENCY is the ratio of the weight or volume of coating solids adhering to an object to the total weight or volume, respectively, of coating solids used in the application process, expressed as a percentage.

(40) VACUUM-METALIZING COATING is the undercoat applied to the substrate on which the metal is deposited or the overcoat applied directly to the metal film.

(41) VOLATILE ORGANIC COMPOUND (VOC) means any volatile chemical compound that contains the element carbon, excluding carbon monoxide, carbon dioxide, carbonic acid, carbonates and metallic carbides; and excluding methane and exempt compounds.

(c) Requirements

(1) Operating Equipment

A person shall not apply VOC-containing coatings to metal parts and products subject to the provisions of this rule unless the coating is applied with properly operating equipment according to an operating procedure specified by the equipment manufacturer or the Executive Officer, or designee, and by the use of one of the following methods:

(A) Electrostatic attraction, or

(B) Flow coat, or

(C) Dip coat, or

(D) Roll coater, or

(E) High-Volume, Low-Pressure (HVLP) Spray, or

(F) Hand Application Methods, or

(G) Such other coating application methods as are demonstrated to the Executive Officer, or designee, using EPA approved procedures, specified in paragraph (f)(4) of this rule, to be capable of achieving at least 65 percent transfer efficiency and for which written approval of the Executive Officer, or designee, has been obtained.

(2) VOC Content of Coatings

A person shall not apply to metal parts and products subject to the provisions of this rule any coatings, including any VOC-containing materials added to the original coating supplied by the manufacturer, which contain VOC in excess of the limits specified below:

LIMITS
Grams of VOC Per Liter of Coating,
Less Water and Less Exempt Compounds

Coating	Air Dried	(lb/gal)	Baked	(lb/gal)
General	340	(2.8)	275	(2.3)
Military Specification	340	(2.8)	275	(2.3)
Etching Filler	420	(3.5)	420	(3.5)
Solar-Absorbent	420	(3.5)	360	(3.0)
Heat-Resistant	420	(3.5)	360	(3.0)
Extreme High-Gloss	420	(3.5)	360	(3.0)
Metallic	420	(3.5)	420	(3.5)
Extreme Performance	420	(3.5)	360	(3.0)
Prefabricated Architectural Component	420	(3.5)	275	(2.3)
Touch Up	420	(3.5)	360	(3.0)
Repair	420	(3.5)	360	(3.0)
Silicone Release	420	(3.5)	420	(3.5)
High Performance Architectural	420	(3.5)	420	(3.5)
Camouflage	420	(3.5)	420	(3.5)
Vacuum-Metalizing	420	(3.5)	420	(3.5)
Mold-Seal	420	(3.5)	420	(3.5)
High-Temperature	420	(3.5)	420	(3.5)
Electric-Insulating Varnish	420	(3.5)	420	(3.5)
Pan Backing	420	(3.5)	420	(3.5)
Pretreatment Coatings	420	(3.5)	420	(3.5)

(3) A person shall not use VOC-containing materials which have a VOC content of more than 200 grams per liter of material for stripping any coating governed by this rule.

(4) Containers used for the disposal of cloth or paper used in stripping cured coating shall be closed except when depositing or removing the cloth or paper from the container.

(5) Solvent Cleaning Operations; Storage and Disposal of VOC-containing Materials

Solvent cleaning of application equipment, parts, products, tools, machinery, equipment, general work areas, and the storage and disposal of VOC-

containing materials used in cleaning operations shall be carried out pursuant to Rule 1171 - Solvent Cleaning Operations.

(6) For coatings that contain reactive diluents, the Grams of VOC per Liter of Coating, Less Water and Less Exempt Compounds shall be calculated by the following equation:

$$\text{Grams of VOC per Liter of Coating, Less Water and Less Exempt Compounds} = \frac{W_s - W_w - W_{es}}{V_m - V_w - V_{es}}$$

Where: W_s = weight of volatile compounds not consumed during curing, in grams

W_w = weight of water not consumed during curing, in grams

W_{es} = weight of exempt compounds not consumed during curing, in grams

V_m = volume of the material prior to reaction, in liters

V_w = volume of water not consumed during curing, in liters

V_{es} = volume of exempt compounds not consumed during curing, in liters

(7) Owners and/or operators of control equipment may comply with provisions of subparagraph (c)(1) and/or (c)(2) by using approved air pollution control equipment provided that the VOC emissions from such operations and/or materials are reduced in accordance with the provisions of (A) and (B):

(A) The control device shall reduce emissions from an emission collection system by at least 95 percent by weight or the output of the air pollution control device is 50 PPM by volume calculated as carbon with no dilution.

(B) The owner/operator demonstrates that the system collects at least 90 percent by weight of the emissions generated by the sources of emissions.

(d) Prohibition of Specifications

A person shall not specify the use in the District of any coating to be applied to any metal parts and products subject to the provisions of this rule that does not meet the

limits and requirements of this rule. The requirements of this paragraph shall apply to all written and oral contracts.

(e) [Reserved for Prohibition of Sale of Noncompliant Coating]

(f) Methods of Analysis

(1) Determination of VOC content

The volatile organic content of coatings subject to the provisions of this rule shall be determined by the following methods:

(A) United States Environmental Protection Agency (USEPA) Reference Method 24 (Code of Federal Regulations Title 40 Part 60, Appendix A). The exempt solvent content shall be determined by SCAQMD Method 303 (Determination of Exempt Compounds) contained in the SCAQMD "Laboratory Methods of Analysis for Enforcement Samples" manual; or,

(B) SCAQMD Method 304 [Determination of Volatile Organic Compounds (VOCs) in Various Materials] contained in the SCAQMD "Laboratory Methods of Analysis for Enforcement Samples" manual.

(C) Exempt Perfluorocarbon Compounds

The following classes of 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 sulfur bonds only to carbon and fluorine,

will be analyzed as exempt compounds for compliance with paragraph (c), only when manufacturers specify which individual compounds are used in the coating formulation. In addition, the manufacturers must identify the United States Environmental Protection Agency, California Air Resources Board, and the District approved test methods used to quantify the amount of each exempt compound.

(2) Determination of Efficiency of Emission Control System

(A) Capture efficiency specified in paragraph (c)(7), shall be determined by the procedures presented in the USEPA technical guidance document, "Guidelines for Determining Capture Efficiency, January 9, 1995." Notwithstanding the test methods specified by the Guidelines, any other method approved by the USEPA, the California Air Resources Board, and the SCAQMD Executive Officer may be substituted.

(B) The efficiency of the control device of the emission control system as specified in paragraph (c)(7) and the VOC content in the control device exhaust gases, measured and calculated as carbon, shall be determined by the USEPA Test Methods 25, 25A, or SCAQMD Method 25.1 (Determination of Total Gaseous Non-Methane Organic Emissions as Carbon) as applicable. USEPA Test Method 18, or ARB Method 422 shall be used to determine emissions of exempt compounds.

(3) Multiple Test Methods

When more than one test method or set of methods are specified for any testing, a violation of any requirement of this rule established by any one of the specified test methods or set of test methods shall constitute a violation of the rule.

(4) Demonstrations of transfer efficiency shall be conducted in accordance with SCAQMD method "Spray Equipment Transfer Efficiency Test Procedure for Equipment User," May 24, 1989.

(g) Exemptions

(1) The provisions of subparagraphs (c)(1) and (c)(2) of this rule, shall not apply to:

(A) Stencil coatings;

(B) A facility which uses a total of less than one gallon of coating, including any VOC-containing materials added to the original coating as supplied by the manufacturer, subject to this rule, in any one day;

(C) Total noncompliant coating use per facility that does not exceed 55 gallons per rolling 12-month period;

(D) Safety-indicating coatings;

(E) Magnetic data storage disk coatings;

(F) Solid-film lubricants;

(2) The provisions of subparagraph(c)(1) of this rule shall not apply to any coating operation that, because of physical and/or chemical characteristics of the substrate or safety conditions, cannot meet a 65 percent transfer efficiency, provided that:

(A) A general coater submits a written petition to the Executive Officer setting forth the basis, including test data, for the claim that 65 percent transfer efficiency cannot be met, and approval is granted by the Executive Officer, or designee.

(B) A contract painter submits a written petition to, and receives approval from, the Executive Officer, or designee, to exempt the coating of such items; and the contract painter maintains a daily log:

(i) which describes the reason(s) why 65 percent transfer efficiency cannot be achieved, including a written and/or photographic description of the object to be used; and

(ii) into which the entry is made prior to commencement of coating operations for that object; and

(iii) which is made available for review by the District upon request; and

(iv) which is retained in the operator's files for at least two years.

(3) The Executive Officer, or designee, may revoke the approval granted pursuant to subparagraph (g)(2)(B) of this rule if:

(A) the daily log is not adequately maintained; or

(B) an entry is made after the application of coating; or

(C) the physical characteristics of the substrate do not warrant an exemption.

(4) The provisions of subparagraph (c)(1) of this rule shall not apply to the application of touch-up coatings, repair coatings, textured coatings, metallic coatings which have a metallic content of more than 30 grams per liter, mold-seal coatings, and to facilities that use less than three gallons of coating, as applied, including any VOC-containing materials added to the original coating as supplied by the manufacturer, per day.

(5) The provisions of subparagraphs (c)(1), (c)(2), and (c)(3) of this rule do not apply to the application of coatings and use of cleaning solvents while conducting performance tests on the coatings at paint manufacturing facilities.

(6) The provisions of paragraph (c)(2) of this rule shall not apply to high performance architectural, vacuum metalizing, and/or pretreatment coatings used at a facility which has the potential to emit a total of 10 tons or less per year of VOCs, before application of add-on controls.

(7) The provisions of paragraph (c)(2) of this rule shall not apply to vacuum metalizing coatings until January 1, 1997, provided the coatings meet a VOC content limit of 800 grams per liter, less water and less exempt compounds.

(8) The provisions of paragraph (c)(2) of this rule shall not apply to high performance architectural coatings until January 1, 1997, provided the coatings meet a VOC content limit of 750 grams per liter, less water and less exempt compounds.

(9) The provisions of paragraph (c)(2) of this rule shall not apply to pretreatment coatings until January 1, 1997, provided the coatings meet a VOC content limit of 780 grams per liter, less water and less exempt compounds.

(h) Rule 442 Applicability

Any coating, coating operation, or facility which is exempt from all or a portion of the VOC limits of this rule shall comply with the provisions of Rule 442.

(i) Alternative Emission Control Plan

An owner/operator may achieve compliance with subparagraph (c)(2) by means of an Alternative Emission Control Plan pursuant to Rule 108.

(j) Qualification for Classification as Extreme-Performance Coating

A coating may be classified as an extreme-performance coating provided that the applicator requests and receives written approval of such classification from the Executive Officer, or designee, prior to application of such coating, and shows that the intended use of each coated object would require coating with an extreme-performance coating.

6/16/95

(k) Recordkeeping

Daily records of coating and solvent usage shall be maintained pursuant to Rule 109.

(l) Emission Reduction Credits

Facilities that use high performance architectural, pretreatment, or vacuum metalizing coatings shall not receive emission reduction credit(s) pursuant to SCAQMD Rule 1309 above those emission reduction credit(s) that the facility would have received if it was operated with coatings having a VOC content of no more than 420 gm/L, less water and less exempt compounds.

ANTELOPE VALLEY AIR POLLUTION CONTROL DISTRICT

Rule1108.1. Emulsified Asphalt

(Adopted August 3, 1979)(Amended December 4, 1981) (Amended November 4, 1983)

(a) Definitions

For the purpose of this rule, emulsified asphalt is a liquid petroleum product produced by fluxing an asphaltic base with water and an emulsifier, and is classed as rapid, medium, or slow setting grade as described under Section 94 of the January 1981, State of California Department of Transportation Standard Specifications.

(b) Requirements

A person shall not sell or offer for sale for use in the District, or use any emulsified asphalt containing organic compounds which evaporate at 260^{o}C (500^{o}F) or lower as determined by ASTM Method D244 (AASHTO T59), or other test method as approved by the Executive Officer, in excess of:

(A) Effective January 1, 1982:

(i) Slow setting type, three percent by volume

(ii) Rapid setting type, three percent by volume

(B) Before January 1, 1987:

(i) Medium setting type for use with dense graded aggregate, eight percent by volume.

(ii) Medium setting type for use with dense graded aggregate, 12 percent by volume.

(C) On and after January 1, 1987:

(i) Medium setting type for use with any aggregate, three percent by volume.

(c) Exemptions

The provisions of this rule shall not apply to the use of emulsified asphalt that is subject to other Regulation XI rules, or specifically exempted in such rules.

ANTELOPE VALLEY AIR POLLUTION CONTROL DISTRICT

Rule 1108. Cutback Asphalt

(Adopted May 4, 1979)(Amended December 4, 1981)
(Amended November 4, 1983)(Amended February 1, 1985)

(a) Definitions

For the purpose of this rule, cutback asphalt is a liquid petroleum product produced by fluxing an asphaltic base with suitable distillate and is classed as medium or slow curing grade, as defined in Section 93 of the January 1981, State of California Department of Transportation Standard Specifications.

(b) Requirements

A person shall not sell or offer for sale for use in the District, or use any cutback asphalt containing more than 0.5 percent by volume organic compounds which evaporate at 260^{o}C (500^{o}F) or lower as determined by ASTM Method D402 (AASHTO T78) or other test method as approved by the Executive Officer.

(c) Exemptions

The provisions of this rule shall not apply to the use of cutback asphalt that is subject to the provisions of other Regulation XI rules, or specifically exempted in such rules.

ANTELOPE VALLEY AIR QUALITY MANAGEMENT DISTRICT

Rule 1111.
NOx Emissions from Natural-Gas-Fired, Fan-Type Central Furnaces

(Adopted December 1, 1978)(Amended July 8, 1983)

(a) Definitions

1. Fan Type Central Furnace is a self-contained space heater providing for circulation of heated air at pressures other than atmospheric through ducts more than 10 inches in length that have:

   (A) an input rate of less than 175,000 BTU/hr; or

   (B) for combination heating and cooling units, a cooling rate of less than 65,000 BTU/hr.

2. Annual Fuel Utilization Efficiency (AFUE) is defined in Section 4.2.35 of Code of Federal Regulations, Title 10, Part 430, Subpart B, Appendix N.
3. Useful Heat Delivered to the Heated Space is the AFUE (expressed as a fraction) multiplied by the heat input.

(b) Requirements

1. A manufacturer shall not, after January 1, 1984, manufacture or supply for sale or use in the South Coast Air Quality Management District natural-gas-fired, fan-type central furnaces, unless such furnaces meet the requirements of subparagraph (3).
2. A person shall not, after April 2, 1984, sell or offer for sale within the South Coast Air Quality Management District natural-gas-fired, fan-type central furnaces unless such furnaces meet the requirements of subparagraph (3).
3. Natural-gas-fired, fan-type central furnaces shall:

   (A) not emit more than 40 nanograms of oxides of nitrogen (calculated as NO2) per joule of useful heat delivered to the heated space; and

   (B) be certified in accordance with paragraph (c) of this rule.

(c) Certification

1. The manufacturer shall have each appliance model tested in accordance with the following:

   (A) Oxides of nitrogen measurements, test equipment, and other required test procedures shall be in accordance with methods approved by the Executive Officer.

   (B) Operation of the furnace shall be in accordance with the procedures specified in Section 3.1 of Code of Federal Regulations, Title 10, Part 430, Subpart B, Appendix N.

2. One of the two formulas shown below shall be used to determine the nanograms of oxides of nitrogen per joule of useful heat delivered to the heated space:

   Where:

N = nanograms of emitted oxides of nitrogen per joule of useful heat.

P = concentration (ppm volume) of oxides of nitrogen in flue gas as tested.

U = volume percent CO2 in water-free flue gas for stoichiometric combustion.

H = gross heating value of fuel, BTU/cu.ft. (60oF, 30-in. Hg).

C = measured volume percent of CO2 in water-free flue gas, assuming complete combustion and no CO present.

E = AFUE, percent (calculated using Table 2).

Y = volume percent of O2 in flue gas.

Z = heating value of gas, joules/cu. meter (0.0oC, 1 ATM).

3. The manufacturer shall submit to the Executive Officer the following:

(A) A statement that the model is in compliance with subsection (b). (The statement shall be signed and dated, and shall attest to the accuracy of all statements.)

(B) General Information

(i) Name and address of manufacturer.

(ii) Brand name.

(iii) Model number, as it appears on the furnace rating plate.

(C) A description of the furnace and specifications for each model being certified.

(d) Identification

The manufacturer shall display the model number of the furnace complying with subsection (b) on the shipping carton and rating plate.

(e) Enforcement

1. The Executive Officer may require the emission test results to be provided when deemed necessary to verify compliance.
2. The Executive Officer may periodically conduct such tests as are deemed necessary to insure compliance with subsection (b).

(f) Exemptions

1. The provisions of this rule shall not apply to furnaces to be installed in mobile homes.
2. The provisions of this rule shall not apply to natural-gas-fired, fan-type central furnaces utilizing three-phase electrical current until January 1, 1986.

[SIP: Approved 5/3/84, 49 FR 18830, 40 CFR 52.220(c)(148)(vi)(A); Approved 9/28/81, 46 FR 47451, 40 CFR 52.220(c)(67)(i)(B)

(**Adopted**: 09/02/77; **Amended**: 02/02/77;**Amended**: 02/03/78; **Amended**: 09/05/80; **Amended**: 04/03/81; **Amended**: 07/03/81; **Amended** by CARB 10/21/81; **Amended**: 08/05/83; **Amended**: 03/16/84; **Amended**: 08/02/85; **Amended**: 11/01/85; **Amended**: 02/06/87; **Amended**: 01/05/90; **Amended**: 02/02/90; **Amended**: 11/02/90; **Amended**: 12/07/90; **Amended**: 09/06/91; **Amended**: 03/08/96; **Amended**: 08/09/96; **Amended**: 11/08/96; **Amended**: 03/18/03; **Amended**: 06/18/13**)**

RULE 1113
Architectural Coatings

(A) General

(1) Purpose: The purpose of this rule is to limit the quantity of Volatile Organic Compounds (VOC) in Architectural Coatings.

(2) Applicability: Except as provided in subsection (A)(3), this rule is applicable to any person who supplies, sells, offers for sale, manufactures, blends, or repackages any Architectural Coating for use within the Antelope Valley Air Quality Management District (District) as well as any person who applies or Solicits the application of any Architectural Coating within the District.

(3) This rule does not apply to:

(a) Any Architectural Coating that is supplied, sold, offered for sale, or manufactured for use outside of the District or for shipment to other manufacturers for reformulation or repackaging.

(b) Any Aerosol Coating Product.

(c) With the exception of Section (E), any Architectural Coating that is sold in a container with a volume of one (1) liter (1.057 quart) or less.

(B) Definitions

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

(1) "Adhesive"- Any chemical substance that is applied for the purpose of bonding two surfaces together other than by mechanical means.

(2) "Aerosol Coating Product"- A pressurized Coating product containing pigments or resins that dispenses product ingredients by means of a propellant, and is

packaged in a disposable can for hand-held application, or for use in specialized equipment for ground traffic/marking applications.

(3) "Air Pollution Control Officer" (APCO)- The person appointed to the position of Air Pollution Control Officer of the District pursuant to the provisions of California Health & Safety Code §40750 and his or her designee.

(4) "Aluminum Roof Coating"- A Coating labeled and formulated exclusively for application to roofs and containing at least 84 grams of elemental aluminum pigment per liter of Coating (at least 0.7 pounds per gallon). Pigment content shall be determined in accordance with method referenced in subsection (G)(5)(k).

(5) "Antenna Coating"- A Coating labeled and formulated exclusively for application to equipment and associated structural Appurtenances that are used to receive or transmit electromagnetic signals.

Effective 06/18/14 the Antenna Coating category is eliminated and will be subjected to the applicable VOC limits of Table 1.

(6) "Antifouling Coating"- A Coating labeled and formulated for application to submerged stationary structures and their Appurtenances to prevent or reduce the attachment of marine or freshwater biological organisms. To qualify as an antifouling Coating, the Coating must be registered with both the USEPA under the Federal Insecticide, Fungicide, and Rodenticide Act (7 U.S.C. §§136 *et seq*.) and with the California Department of Pesticide Regulation.

Effective 06/18/14 the Antifouling Coating category is eliminated and will be subjected to the applicable VOC limits of Table 1.

(7) "Appurtenance"- Any accessory to a stationary structure coated at the site of installation, whether installed or detached, including but not limited to: bathroom and kitchen fixtures; cabinets; concrete forms; doors; elevators; fences; hand railings; heating equipment, air conditioning equipment, and other fixed mechanical equipment or stationary tools; lampposts; partitions; pipes and piping systems; rain gutters and downspouts; stairways, fixed ladders, catwalks, and fire escapes; and window screens.

(8) "Architectural Coating"- A Coating to be applied to stationary structures or their Appurtenances at the site of installation, to portable buildings at the site of installation, to pavements, or to curbs. Coatings applied in Shop Applications or to non-stationary structures such as airplanes, ships, boats, railcars, and automobiles, and Adhesives are not considered Architectural Coatings for the purposes of this rule.

(9) "Basement Specialty Coating"- A clear or opaque Coating that is labeled and formulated for application to concrete and masonry surfaces to provide a hydrostatic seal for basements and other below-grade surfaces. Coating must meet the following criteria:

(a) Coating must be capable of withstanding at least 10 psi of hydrostatic pressure, as determined in accordance with test method referenced in subsection (G)(5)(j).
(b) Coating must be resistant to mold and mildew growth and must achieve a microbial growth rating of eight (8) or more, as determined in accordance with test methods referenced in subsection (G)(5)(m).

(10) "Bitumens"- Black or brown materials including, but not limited to, asphalt, tar, pitch, and asphaltite that are soluble in carbon disulfide, consist mainly of hydrocarbons, and are obtained from natural deposits or as residues from the distillation of crude petroleum or coal.

(11) "Bituminous Roof Coating"- A Coating which incorporates Bitumens that is labeled and formulated exclusively for roofing.

(12) "Bituminous Roof Primer"- A primer which incorporates Bitumens that is labeled and formulated exclusively for roofing and intended for the purpose of preparing a weathered or aged surface or improving the adhesion of subsequent surfacing components.

(13) "Bond Breaker"- A Coating labeled and formulated for application between layers of concrete to prevent a freshly poured top layer of concrete from bonding to the layer over which it is poured.

(14) "California Air Resources Board" (CARB)- The California Air Resources Board, the Executive Officer of CARB and his or her authorized representative, the powers and duties of which are described in Part 2 of Division 26 of the California Health & Safety Code (commencing with §39500).

(15) "Clear Brushing Lacquers"- Clear wood finishes, excluding clear lacquer sanding sealers, formulated with nitrocellulose or synthetic resins to dry by solvent evaporation without chemical reaction and to provide a solid, protective film, which are intended exclusively for application by brush, and which are labeled as specified in subsection (D)(1)(f).

Effective 06/18/14 the Clear Brushing Lacquers category is eliminated and will be subjected to the applicable VOC limits of Table 1.

(16) "Clear Wood Coatings"- Clear and semi-transparent Coatings, including lacquers and varnishes, applied to Wood Substrates to provide a transparent or translucent solid film.

Effective 06/18/14 the Clear Wood Coating category is eliminated and will be subjected to the applicable VOC limits of Table 1.

(17) "Coating"- A material applied onto or impregnated into a substrate for protective, decorative, or functional purposes. Such materials include, but are not limited to, paints, Varnishes, Sealers, and Stains.

(18) "Colorant"- A concentrated pigment dispersion in water, solvent, and/or binder that is added to an Architectural Coating after packaging in sale units to produce the desired color.

(19) "Concrete Curing Compound"- A Coating labeled and formulated for application to freshly poured concrete to retard the evaporation of water and/or harden or dustproof the surface of freshly poured concrete.

(20) "Concrete/Masonry Sealer"- A clear or opaque Coating that is labeled and formulated primarily for application to concrete and masonry surfaces to perform one or more of the following functions:

(a) Prevent penetration of water;
(b) Provide resistance against abrasion, alkalis, acids, mildew, staining, or ultraviolet light; or
(c) Harden or dustproof the surface of aged or cured concrete.

(21) "District"- The Antelope Valley Air Quality Management District, the geographical area of which is described District Rule 103 – *Definition of Geographical Areas.*

(22) "Driveway Sealer"- A Coating labeled and formulated for application to worn asphalt driveway surfaces to perform one or more of the following functions:

(a) Fill cracks;
(b) Seal the surface to provide protection; or
(c) Restore or preserve the appearance.

(23) "Dry Fog Coating"- A Coating labeled and formulated only for spray application such that overspray droplets dry before subsequent contact with incidental surfaces in the vicinity of the surface Coating activity.

(24) "Exempt Compounds"- Those compounds listed in 40 Code of Federal Regulation (CFR) 51.100(s).

(25) "Faux Finishing Coating"- A Coating labeled and formulated to meet one or more of the following:

(a) A glaze or textured Coating used to create artistic effects including, but not limited to, dirt, suede, old age, smoke damage, and simulated marble and wood grain.

(b) A decorative Coating used to create a metallic, iridescent, or Pearlescent appearance that contains at least 48 grams of Pearlescent mica pigment or other iridescent pigment per liter of Coating applied (at least 0.4 pounds per gallon).

(c) A decorative Coating used to create a metallic appearance that contains less than 48 grams of elemental metallic pigment per liter of Coating as applied (less than 0.4 pounds per gallon), when tested in accordance method referenced subsection (G)(5)(f).

(d) A decorative Coating used to create a metallic appearance that contains greater than 48 grams of elemental metallic pigment per liter of Coating as applied (greater than 0.4 pounds per gallon) and which requires a clear topcoat to prevent the degradation of the finish under normal use conditions. The metallic pigment content shall be determined in accordance with method referenced subsection (G)(5)(f).

(e) A clear topcoat to seal and protect a Faux Finishing Coating that meets one or more of the requirements of subsection (a) –(d) above. These clear topcoats must be sold and used solely as a part of a Faux Finishing Coating system, and must be labeled in accordance with subsection (D)(1)(d).

(26) "Fire-Resistive Coating"– A Coating labeled and formulated to protect the structural integrity by increasing the fire endurance of interior or exterior steel and other structural materials. The category includes sprayed fire resistive materials and intumescent Fire-Resistive Coatings that are used to bring structural materials into compliance with federal, state, and local building code requirements. The Fire-Resistive Coating and the testing agency must be approved by building code officials and shall be tested in accordance with the applicable test method found in subsection (G)(5)(h).

(27) "Fire-Retardant Coating"- A Coating labeled and formulated to retard ignition and flame spread, that has been fire tested and rated by a testing agency approved by building code officials for use in bringing building and construction materials into compliance with federal, state and local building code requirements. The Fire-Retardant Coating and the testing agency must be approved by building code officials and shall be tested in accordance with the test method referenced in subsection (G)(5)(g).

Effective 06/18/14 the Fire-Retardant Coating category is eliminated and Coatings with fire retardant properties will be subject to the VOC limit of their primary category (eg., Flat, Nonflat, etc.).

(28) "Flat Coating"- A Coating that is not defined under any other definition in this rule and that registers gloss less than 15 on an 85-degree meter or less than 5 on a 60-degree meter according to the applicable test method found in subsection (G)(5)(i).

(29) "Floor Coating"- An opaque Coating that is labeled and formulated for application to flooring, including, but not limited to, decks, porches, steps, garage floors, and other horizontal surfaces which may be subject to foot traffic.

(30) "Flow Coating"- A Coating labeled and formulated exclusively for use by electric power companies or their subcontractors to maintain the protective Coating systems present on utility transformer units.

Effective 06/18/14 the Flow Coating category is eliminated and will be subjected to the applicable VOC limits of Table 1.

(31) "Form-Release Compound"- A Coating labeled and formulated for application 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.

(32) "Graphic Arts Coating or Sign Paint"- A Coating labeled and formulated for hand-application by artists using brush, airbrush, or roller techniques to indoor and outdoor signs (excluding structural components) and murals including lettering enamels, poster colors, copy blockers, and bulletin enamels.

(33) "High-Temperature Coating"- A high performance Coating labeled and formulated for application to substrates exposed continuously or intermittently to temperatures above 204^{o}C (400^{o}F).

(34) "Industrial Maintenance Coating"- A high performance Architectural Coating, including Primers, Sealers, Undercoaters, intermediate coats, and topcoats, formulated for application to substrates, including floors, exposed to one or more of the following extreme environmental conditions listed in subsections (a) - (e) below, and labeled as specified in subsection (D)(1)(e).

(a) Immersion in water, wastewater, or chemical solutions (aqueous and non-aqueous solutions), or chronic exposure of interior surfaces to moisture condensation;
(b) Acute or chronic exposure to corrosive, caustic or acidic agents, or to chemicals, chemical fumes, or chemical mixtures or solutions;
(c) Frequent exposure to temperatures above 121°C (250°F);
(d) Frequent heavy abrasion, including mechanical wear and frequent scrubbing with industrial solvents, cleansers, or scouring agents; or
(e) Exterior exposure of metal structures and structural components.

(35) "Lacquer"- A clear or opaque wood Coating, including clear lacquer sanding Sealers, formulated with cellulosic or synthetic resins to dry by evaporation without chemical reaction and to provide a solid, protective film.

Effective 06/18/14 the Lacquer category is eliminated and will be subjected to the applicable VOC limits of Table 1.

(36) "Low Solids Coating"- A Coating containing 0.12 kilogram or less of solids per liter (one (1) pound or less of solids per gallon) of Coating material as recommended for application by the manufacturer. The VOC Content for Low Solids Coating shall be calculated in accordance with subsection (G)(1)(a)(ii).

(37) "Magnesite Cement Coating"- A Coating labeled and formulated for application to magnesite cement decking to protect the magnesite cement substrate from erosion by water.

(38) "Manufacturer's Maximum Thinning Recommendation"- The maximum recommendation for thinning that is indicated on the label or lid of the Coating container.

(39) "Mastic Texture Coating"- A Coating labeled and formulated to cover holes and minor cracks and to conceal surface irregularities, and is applied in a single coat of at least 10 mils (0.010 inch) dry film thickness.

(40) "Medium Density Fiberboard" (MDF)- A composite wood product, panel, molding, or other building material composed of cellulosic fibers (usually wood) made by dry forming and pressing of a resinated fiber mat.

(41) "Metallic Pigmented Coating"- A Coating labeled and formulated to provide a metallic appearance. The Coating must contain at least 48 grams of elemental metallic pigment (excluding zinc) per liter of Coating as applied (at least 0.4 pounds per gallon), when tested in accordance with the applicable test method found in subsection (G)(5)(k). The Metallic Pigmented Coating category does not include coatings applied to roofs or Zinc-Rich Primers. Effective for products manufactured on or after 06/18/14, the Metallic Pigmented Coating category does not include coatings applied to roofs or Zinc-Rich Primers.

(42) "Multi-Color Coating"- A Coating that is packaged in a single container and that is labeled and formulated to exhibit more than one color when applied in a single coat.

(43) "Nonflat Coating"- A Coating that is not defined under any other definition in this rule and that registers a gloss of 15 or greater on an 85-degree meter and five (5) or greater on a 60-degree meter according to the applicable test method found in subsection (G)(5)(i).

(44) "Nonflat - High Gloss Coating"- A Nonflat Coating that registers a gloss of 70 or above on a 60-degree meter according to applicable test method found in subsection (G)(5)(i) and labeled in accordance with subsection (D)(1)(l).

(45) "Nonindustrial Use"- Nonindustrial use means any use of Architectural Coatings except in the construction or maintenance of any of the following: facilities used in the manufacturing of goods and commodities; transportation infrastructure, including highways, bridges, airports and railroads; facilities used in mining activities, including petroleum extraction; and utilities infrastructure, including power generation and distribution, and water treatment and distribution systems.

(46) "Particleboard"- A composite wood product panel, molding, or other building material composed of cellulosic material (usually wood) in the form of discrete particles, as distinguished from fibers, flakes, or strands, which are pressed together with resin.

(47) "Pearlescent"- Exhibiting various colors depending on the angles of illumination and viewing, as observed in mother-of-pearl.

(48) "Plywood"- A panel product consisting of layers of wood Veneers or composite core pressed together with resin. This includes panel products made by either hot or cold pressing (with resin) Veneers to a platform.

(49) "Post-Consumer Coating"- A finished Coating generated by a business or consumer that has served its intended end use and is recovered from, or otherwise diverted from, the waste stream for the purpose of recycling.

(50) "Pre-Treatment Wash Primer"- A primer that contains a minimum of 0.5 percent acid, by weight, is labeled and formulated for application directly to bare metal surfaces to provide corrosion resistance and to promote adhesion of subsequent topcoats, and is tested in accordance with the applicable test method found in subsection (G)(5)(o).

(51) "Primer, Sealer, and Undercoater"- A Coating labeled and formulated for one or more of the following purposes:

(a) To provide a firm bond between the substrate and the subsequent Coatings;
(b) To prevent subsequent Coatings from being absorbed by the substrate;
(c) To prevent harm to subsequent Coatings by materials in the substrate;
(d) To provide a smooth surface for the subsequent application of Coatings;
(e) To provide a clear finish coat to seal the substrate; or
(f) To block materials from penetrating into or leaching out of a substrate.

(52) "Quick-Dry Enamel"- A nonflat Coating that is labeled as specified in subsection (D)(1)(k)(i) and that is formulated to have the following characteristics:

(a) Is capable of being applied directly from the container under normal conditions with ambient temperatures between 16º and 27ºC (60º and 80ºF);

(b) When tested in accordance with ASTM Designation D 1640-95 sets to touch in two (2) hours or less, is tack free in four (4) hours or less, and dries hard in eight (8) hours or less by the mechanical test method; and

(c) Has a dried film gloss of 70 or above on a 60 degree meter.

Effective 06/18/14 the Quick-Dry Enamel category is eliminated and will be subjected to the applicable VOC limits of Table 1.

(53) "Quick-Dry Primer, Sealer, and Undercoater"- A primer, sealer, or undercoater that is dry to the touch in 30 minutes and can be recoated in two (2) hours when tested in accordance with ASTM Designation D 1640-95.

Effective 06/18/14 the Quick-Dry Primer, Sealer, and Undercoater category is eliminated and will be subjected to the applicable VOC limits of Table 1.

(54) "Reactive Penetrating Sealer"- A clear or pigmented Coating that is labeled and formulated for application to above-grade concrete and masonry substrates to provide protection from water and waterborne contaminants, including, but not limited to, alkalis, acids, and salts. These Sealers must penetrate into concrete and

masonry substrates and chemically react to form covalent bonds with naturally occurring minerals in the substrate. They line the pores of concrete and masonry substrates with a hydrophobic Coating, but do not form a surface film. Reactive Penetrating Sealers must meet all of the following criteria:

(a) The Reactive Penetrating Sealer must improve water repellency at least 80 percent after application on a concrete or masonry substrate. This performance must be verified in accordance with applicable test methods found in subsection (G)(5)(q); and
(b) The Reactive Penetrating Sealer must not reduce the water vapor transmission rate by more than two (2) percent after application on a concrete or masonry substrate. This performance must be verified in accordance with applicable test method found in subsection (G)(5)(r); and
(c) Products labeled and formulated for vehicular traffic surface chloride screening applications must meet the performance criteria referenced in subsection (G)(5)(p).
(d) Reactive Penetrating Sealers must be labeled in accordance with subsection (D)(1)(i)(i).

(55) "Recycled Coating"- An Architectural Coating formulated such that it contains not less than 50 percent by volume post-consumer Coating, with a maximum of 50 percent by volume Secondary Industrial Materials or Virgin Materials.

(56) "Residential"- Areas where people reside or lodge, including, but not limited to, single and multiple family dwellings, condominiums, mobile homes, apartment complexes, motels, and hotels.

(57) "Roof Coating"- A non-bituminous Coating labeled and formulated for application to roofs for the primary purpose of preventing penetration of the substrate by water or reflecting heat and ultraviolet radiation.

(58) "Rust Preventative Coating"- A Coating formulated to prevent the corrosion of metal surfaces.

(a) Rust Preventative Coatings include the following:

(i) Direct-to-metal Coating; or
(ii) Coating intended for application over rusty, previously coated surfaces

(b) Rust Preventative Coatings does not include the following:

(i) Coatings that are required to be applied as a topcoat over a primer; or
(ii) Coatings that are intended for use on wood or any other non-metallic surface.

Rust Preventative Coatings must be labeled as specified in subsection (D)(1)(g)(i)

(59) "Sanding Sealer"- A clear or semi-transparent wood Coating labeled and formulated for application to bare wood to seal the wood and to provide a coat that can be abraded to create a smooth surface for subsequent applications of Coatings. A Sanding Sealer that also meets the definition of a Lacquer is not included in this category, but is included in the Lacquer category.
Effective 06/18/14 the Sanding Sealer category is eliminated and will be subjected to the applicable VOC limits of Table 1.

(60) "Sealer"- A coating labeled and formulated for application to a substrate for one or more of the following purposes: to prevent subsequent coatings from being absorbed by the substrate, or to prevent harm to subsequent coatings by materials in the substrate.

Effective 06/18/14 the Sealer category is eliminated and coatings meeting this definition will be subject to the applicable VOC limits of Table 1.

(61) "Secondary Industrial Materials"- Products or by-products of the paint manufacturing process that are of known composition and have economic value but can no longer be used for their intended purpose.

(62) "Semitransparent Coating"- A Coating that contains binders and colored pigments and is formulated to change the color of the surface, but not conceal the grain pattern or texture.

(63) "Shellac"- A clear or opaque Coating formulated solely with the resinous secretions of the lac beetle (*Laciffer lacca*), and formulated to dry by evaporation without a chemical reaction.

(64) "Shop Application"- Application of a Coating to a product or a component of a product in or on the premises of a factory or a shop as part of a manufacturing, production, or repairing process (e.g., original equipment manufacturing Coatings).

(65) "Solicit"- To require for use or to specify, by written or oral contract.

(66) "Specialty Primer, Sealer, and Undercoater"- A Coating that is formulated for application to a substrate to block water-soluble stains resulting from: fire, smoke or water damage. Effective for products manufactured after 06/18/14, a Coating that is formulated for application to a substrate to block water-soluble stains resulting from: fire damage, smoke damage or water damage, Specialty Primers, Sealers and Undercoaters must be labeled in accordance with section (D)(1)(h)(i).

(67) "Stain"- A semitransparent or opaque Coating labeled and formulated to change the color of a surface but not conceal the grain pattern or texture.

(68) "Stone Consolidant"- A Coating that is labeled and formulated for application to stone substrates to repair historical structures that have been damaged by weathering or other decay mechanisms.

(a) Must penetrate into stone substrates to create bonds between particles and consolidate deteriorated material;
(b) Must be specified and used in accordance with method referenced in subsection (G)(5)(s); and
(c) Labeled for professional use only, in accordance with the labeling requirements in subsection (D)(1)(j)(i).

(69) "Swimming Pool Coating"- A Coating labeled and formulated to coat the interior of swimming pools and to resist swimming pool chemicals. Swimming Pool Coatings include Coatings used for swimming pool repair and maintenance. Effective 06/18/14 the Swimming Pool Repair and Maintenance Coating category is eliminated and will be subjected to the applicable VOC limits of Table 1.

(70) "Temperature-Indicator Safety Coating"- A Coating labeled and formulated as a color-changing indicator Coating for the purpose of monitoring the temperature and safety of the substrate, underlying piping, or underlying equipment, and for application to substrates exposed continuously or intermittently to temperatures above 204^{o}C (400^{o}F).

Effective 06/18/14 the Temperature-Indicator Safety Coating category is eliminated and will be subjected to the applicable VOC limits of Table 1.

(71) "Tint Base"- An Architectural Coating to which Colorant is added after packaging in sale units to produce a desired color.

(72) "Traffic Marking Coating"- A Coating labeled and formulated for marking and striping streets, highways, or other traffic surfaces including, but not limited to, curbs, berms, driveways, parking lots, sidewalks, and airport runways.

(73) "Tub and Tile Refinish Coating"- A clear or opaque Coating that is labeled and formulated exclusively for refinishing the surface of a bathtub, shower, sink, or countertop. The Coatings must meet all the following criteria:

(a) A scratch hardness of 3H or harder and a gouge hardness of 4H or harder. This must be determined in accordance with test method referenced in subsection (G)(5)(w).
(b) A weight loss of 20 milligrams or less after 1000 cycles. This must be determined in accordance with test method referenced in subsection (G)(5)(u).

(c) Capability to withstand 1000 hours or more of exposure with few or no #8 blisters. This must be determined in accordance with test method referenced in subsection (G)(5)(x).

(d) An adhesion rating of 4B or better after 24 hours of recovery. This must be determined in accordance with test method referenced in subsection (G)(5)(v).

(74) "United States Environmental Protection Agency" (USEPA)- The United States Environmental Protection Agency, the Administrator of the USEPA and his or her authorized representative.

(75) "Varnish"- A clear or semi-transparent wood Coating, excluding lacquers and Shellacs, formulated to dry by chemical reaction on exposure to air. Varnishes may contain small amounts of pigment to color a surface, or to control the final sheen or gloss of the finish.

Effective 06/18/14 the Varnish category is eliminated and will be subjected to the applicable VOC limits of Table 1.

(76) "Veneer"- Thin sheets of wood peeled or sliced from logs for use in the manufacture of wood products such as Plywood, laminated Veneer lumber, or other products.

(77) "Virgin Materials"- Materials that contain no Post-Consumer Coatings or Secondary Industrial Materials.

(78) "Volatile Organic Compound" (VOC)- Any volatile compound containing at least one atom of carbon, excluding carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates, and ammonium carbonate, and those compounds listed in 40 CFR 51.100(s).

(79) "VOC Content"- The weight of VOC per volume of Coating. VOC Content is VOC Regulatory, as calculated in subsection (G)(1)(a)(i), for all coatings expect those in the Low Solids category. For coating in the Low Solids category, the VOC Content is VOC Actual, as calculated in subsection (G)(1)(a)(ii). If the coating is a multi-component product, the VOC Content is VOC Content as mixed or catalyzed. If the coating contains silanes, siloxanes, or other ingredients that generate ethanol or other VOCs during the curing process, the VOC content must include the VOCs emitted during curing.

(80) "Waterproofing Sealer"- A Coating labeled and formulated for application to a porous substrate for the primary purpose of preventing the penetration of water.

Effective 06/18/14 the Waterproofing Sealer category is eliminated and will be subjected to the applicable VOC limits of Table 1.

(81) "Waterproofing Concrete/Masonry Sealer"- A clear or pigmented film-forming Coating that is labeled and formulated for sealing concrete and masonry to provide resistance against water, alkalis, acids, ultraviolet light, and Staining.

Effective 06/18/14 the Waterproofing Concrete/Masonry Sealer Coating category is eliminated and will be subjected to the applicable VOC limits of Table 1.

(82) "Waterproofing Membrane"- A clear or opaque Coating that is labeled and formulated for application to concrete and masonry surfaces to provide a seamless waterproofing membrane that prevents any penetration of liquid water into substrate. Intended for the following applications: below-grade surfaces, between concrete slabs, inside tunnels, inside concrete planters, and under flooring materials.

(a) Waterproofing Membranes must meet the following criteria: Coating must be applied in a single coat of at least 25 mils (at least 0.025 inch) dry film thickness; and Coating must meet or exceed the requirements referenced in subsection (G)(5)(z).

(b) The Waterproofing Membrane category does not include topcoats that are included in the Concrete/Masonry Sealer category (e.g., parking deck topcoats, pedestrian deck topcoats, etc.).

(83) "Wood Coatings"- Coatings labeled and formulated for application to Wood Substrates only. The category includes the following: clear and Semitransparent Coatings; Lacquers; Varnishes; Sanding Sealers; penetrating oils; clear Stains; wood conditioner used as undercoats; wood Sealers used as topcoats; opaque lacquers; opaque sanding Sealers; and opaque lacquer Undercoaters. The category does not include the following: clear Sealers that are labeled and formulated for use on concrete/masonry surfaces; or Coatings intended for substrates other than wood. Wood Coatings must be labeled "For Wood Substrates Only", in accordance with subsection (D)(1)(m)(i).

(84) "Wood Preservative"- A Coating labeled and formulated to protect exposed wood from decay or insect attack, that is registered with both the U.S. EPA under the Federal Insecticide, Fungicide, and Rodenticide Act (7 U.S.C. §§136 *et seq.*) and with the California Department of Pesticide Regulation.

(85) "Wood Substrate"- A substrate made of wood, Particleboard, Plywood, Medium Density Fiberboard, rattan, wicker, bamboo, or composite products with exposed wood grain. Wood Products do not include items comprised of simulated wood.

(86) "Zinc-Rich Primer"- A Coating that meets all of the following specifications:

(a) Coating contains at least 65 percent metallic zinc powder or zinc dust by weight of total solids; and
(b) Coating is formulated for application to metal substrates to provide a firm bond between the substrate and subsequent applications of Coating; and
(c) Coating is intended for professional use only and is labeled as such, in accordance with the labeling requirements in subsection (D)(1)(n)(i).

(C) Requirements

(1) VOC Content Limits

(a) Except as provided in subsections (C)(2) and (C)(5), no person shall:

(i) Manufacture, blend, or repackage for use within the District;
(ii) Supply, sell, or offer for sale for use within the District; or
(iii) Solicit for application or apply within the District,
any Architectural Coating with a VOC Content in excess of the corresponding limit specified in Table 1 or Table 2, after the specified effective date in Table 1 or Table 2. Limits are expressed as VOC Content, thinned to the Manufacture's Maximum Thinning Recommendation, excluding any Colorant added to Tint Bases.

(2) Most Restrictive VOC Limit

(a) If anywhere on the container of any Architectural Coating, or any label or sticker affixed to the container, or in any sales, advertising, or technical literature supplied by a manufacturer, or anyone acting on their behalf, any representation is made that indicates that the Coating meets the definition of, or is recommended for use for more than one of the Coating categories listed in Table 1 or Table 2, then the most restrictive VOC Content limit shall apply. This provision does not apply to the following Coating categories:

(i) Aluminum Roof Coatings
(ii) Bituminous roof primers
(iii) High temperature coatings.
(iv) Industrial maintenance coatings.
(v) Low-solids coatings.
(vi) Metallic pigmented coatings.
(vii) Pretreatment wash primers.
(viii) Shellacs.

(ix) Specialty Primers, Sealers and Undercoaters.
(x) Wood Coatings.
(xi) Wood preservatives.
(xii) Zinc-Rich Primers.

(b) (C)(2)(a) does not apply to the following Coating categories manufactured prior to 06/18/14:

(i) Antenna Coatings
(ii) Antifouling Coatings
(iii) Flow Coatings
(iv) Fire-Retardant Coatings
(v) Lacquer Coatings
(vi) Temperature-Indicator Safety Coatings

(3) Specialty Coating Categories

(a) If a Coating meets a definition in Section (B) for one or more specialty coating categories that are listed in Table 1 or Table 2, then that Coating is not required to meet the VOC limits for Flat, Nonflat, or Nonflat-High Gloss Coatings, but is required to meet the VOC limit for the applicable specialty Coating listed in Table 1 or Table 2.

(b) For any Coating that does not meet any of the definitions for the specialty Coatings categories listed in Table 1 or Table 2, the VOC Content limit shall be determined by classifying the Coating as a Flat Coating, Nonflat Coating, or Nonflat - High Gloss Coating based on its gloss, as defined in subsections (B)(28), (B)(43), and (B)(44) and the corresponding Flat, Nonflat, or Nonflat High Gloss VOC limit shall apply.

(4) Eliminated Categories

(a) Effective 06/18/14 the Coating categories listed in Table 2 are eliminated, and these Coatings will be subject to the VOC limit for the applicable category in Table 1, except as provided in subsections (C)(2), (C)(3) and (C)(5).

(5) Sell-Through of Coatings

(a) A Coating listed in Table 1 or Table 2 and manufactured prior to the 06/18/14 effective date may be sold, supplied, or offered for sale for up to three (3) years after 06/18/14, so long as the Coating complied with the standards in effect at the time the Coating was manufactured. A Coating listed in Table 1 or Table 2 and manufactured before the 06/18/14 effective date may be applied at any time, both before and after 06/18/14,

so long as the Coating complied with the standards in effect at the time the Coating was manufactured. This subsection does not apply to any Coating that does not display the date or date-code required by subsection (D)(1)(a).

(6) Painting Practices

(a) All Architectural Coating containers used to apply the contents therein to a surface directly from the container by pouring, siphoning, brushing, rolling, padding, ragging or other means, shall be closed when not in use. These Architectural Coating containers include, but are not limited to, drums, buckets, cans, pails, trays or other application containers.

(b) Containers of any VOC-containing materials used for thinning and cleanup shall be closed when not in use.

(7) Thinning

(a) No person who applies or Solicits the application of any Architectural Coating shall apply a Coating that is thinned to exceed the applicable VOC limit specified in Table 1 or Table 2.

(8) Rust Preventative Coatings

(a) Effective until 06/18/14, a person shall only apply or Solicit the application of a rust preventative Coating for non-industrial uses, unless the rust preventative Coating complies with the industrial maintenance Coating VOC limit specified in Table 1.

(9) Early Compliance Provision

(a) Prior to 06/18/14, any coating that meets a definition in Section (B) for a coating category listed in Table 1 and complies with the applicable VOC limit in Table 1 and with Sections (C)(2)(a) and (D) shall be considered in compliance with this rule.

(D) Container Labeling Requirements

(1) Each manufacturer of any Architectural Coating subject to this rule shall display the following information on the Coating container (or label) in which the Coating is sold or distributed.

(a) Date Code

(i) The date the Coating was manufactured, or a date code representing the date the Coating was manufactured, shall be indicated on the label, lid, or bottom of the container.
(ii) If the manufacturer uses a date code for any Coating, the manufacturer shall file an explanation of each code with CARB.

(b) Thinning Recommendations

(i) A statement of the manufacturer's recommendation regarding thinning of the Coating shall be indicated on the label or lid of the container.
(ii) This requirement does not apply to the thinning of Architectural Coatings with water.
(iii) If thinning of the Coating prior to use is not necessary, the recommendation must specify that the Coating is to be applied without thinning.

(c) VOC Content

Each container of any Coating subject to this rule shall display one of the following values in grams of VOC per liter of coating:

(i) Maximum VOC Content as determined from all potential product formulations; or
(ii) VOC Content as determined from actual formulation data; or
(iii) VOC Content as determined using the applicable test methods in Section (G
(iv) If the manufacturer does not recommend thinning, the container must display the VOC content, as supplied.
(v) If the manufacturer recommends thinning, the container must display the VOC content, including the maximum amount of thinning solvent recommended by the manufacturer.
(vi) Effective 06/18/14, if the coating is a multi-component product, the container must display the VOC content as mixed or catalyzed.
(vii) Effective 06/18/14, if the coating contains silanes, siloxanes, or other ingredients that generate ethanol or other VOCs during the curing process, the VOC content must include the VOCs emitted during curing.

(d) Faux Finishing Coatings

(i) Effective 06/18/14 the labels of all clear topcoat Faux Finishing Coatings shall prominently display the statement “This product can only be sold or used as part of a Faux Finishing Coating system”.

(e) Industrial Maintenance Coatings

(i) The labels of all Industrial Maintenance Coating subject to this rule shall display on the label or lid of the container in which the Coating is sold or distributed one or more of the descriptions listed in subsections (a) - (c) below:

a. “For industrial use only”.
b. “For professional use only”.
c. “Not for Residential use” or “Not intended for Residential use”.

(f) Clear Brushing Lacquers

The labels of all Clear Brushing Lacquers shall prominently display the statements “For brush application only,” and “This product must not be thinned or sprayed”.

Category is eliminated as of 06/18/14.

(g) Rust Preventative Coatings

(i) The labels of all Rust Preventative Coatings shall prominently display the statement “For Metal Substrates Only”.

(h) Specialty Primers, Sealers, and Undercoaters

(i) Effective until 06/18/14, the labels of all Specialty Primers, Sealers, and Undercoaters shall prominently display one or more of the descriptions listed in subsections (a) - (e) below. Effective on or after 06/18/14, the labels of all Specialty Primers, Sealers and Undercoaters shall prominently display one or more of the descriptions listed in subsection (a)-(c). On or after 06/18/14, subsections (d)-(e) will no longer be effective.

a. For fire-damaged substrates
b. For smoke-damaged substrates
c. For water-damaged substrates
d. For excessively chalky substrates.
e. For blocking stains

(ii) Until 06/18/14, the Specialty Primer, Sealer, and Undercoater category includes coatings formulated to seal excessively chalky surfaces. An excessively chalky surface is one that is defined as having a chalk rating of four or less as determined by ASTM Designation D 4214-07. Until 06/18/14, the labels of Specialty Primers, Sealers, and Undercoaters may display "For excessively chalky substrates" instead of, or in conjunction with, one or more of the descriptions listed in Section (D)(1)(h)(i) above.

(i) Reactive Penetrating Sealers

(i) Effective 06/18/14, the labels of all Reactive Penetrating Sealers shall prominently display the statement "Reactive Penetrating Sealer".

(j) Stone Consolidants

(i) Effective 06/18/14 the labels of all Stone Consolidants shall prominently display the statement "Stone Consolidant – For Professional Use Only"

(k) Quick Dry Enamels

(i) The labels of all quick dry enamels shall prominently display the words "Quick Dry" and the dry hard time.

(ii) Category is eliminated as of 06/18/14.

(l) Nonflat - High Gloss Coatings

(i) The labels of all Nonflat - High Gloss Coatings shall prominently display the words "High Gloss".

(m) Wood Coatings

(i) Effective 06/18/14, the labels of all Wood Coatings shall prominently display the statement "For Wood Substrates Only".

(n) Zinc Rich Primers

(i) Effective 06/18/14, the labels of all Zinc Rich Primers shall prominently display the statement display one or more of the descriptions listed in subsections (a) - (c) below.

a. "For professional use only".
b. "For industrial use only".
c. "Not for residential use" or "Not intended for residential use".

(E) Reporting Requirements

(1) Sales Data

(a) A responsible official from each manufacturer shall upon request of the Executive Officer of the CARB, or his or her delegate, provide data concerning the distribution and sales of Architectural Coatings. The responsible official shall within 180 days of written request, provide information, including, but not limited to:

(i) The name and mailing address of the manufacturer;
(ii) The name, address and telephone number of a contact person;
(iii) The name of the Coating product as it appears on the label and the applicable Coating category;
(iv) Whether the product is marketed for interior or exterior use or both;
(v) The number of gallons sold in California in containers greater than one (1) liter (1.057 quart) and equal to or less than one (1) liter (1.057 quart);
(vi) The VOC Actual content and VOC Regulatory content in grams per liter. If thinning is recommended, list the VOC Actual content and VOC Regulatory content after maximum recommended thinning. If containers less than one (1) liter have a different VOC Content than containers greater than one (1) liter, list separately. If the Coating is a multi-component product, provide the VOC Content as mixed or catalyzed;
(vii) The names and Chemical Abstracts Service (CAS) numbers of the VOC constituents in the product;
(viii) The names and CAS numbers of any compounds in the product specifically exempted from the VOC definition, as referenced in subsection (B)(77);
(ix) Whether the product is marketed as solventborne, waterborne, or 100 percent solids;
(x) Description of resin or binder in the product;
(xi) Whether the Coating is a single-component or multi-component product;
(xii) The density of the product in pounds per gallon;
(xiii) The percent by weight of: solids, all volatile materials, water, and any compounds in the product specifically exempted from the VOC definition, as referenced in subsection (B)(77); and
(xiv) The percent by volume of: solids, water, and any compounds in the product specifically exempted from the VOC definition, as referenced in subsection (B)(77).

(b) All sales data listed in subsections (E)(1)(a)(i) through (E)(1)(a)(xiv) shall be maintained by the responsible official for a minimum of three (3) years. Sales data submitted by the responsible official to the Executive Officer of the CARB may be claimed as confidential, and such information shall be handled in accordance with the procedures specified in Title 17, California Code of Regulations Sections 91000-91022.

(c) Although Tertiary Butyl Acetate (tBAc) is exempt as a VOC when determining VOC content of a coating and compliance with emission limitations, it remains a VOC for purposes of all recordkeeping, emissions inventory, and dispersion modeling and must be treated as such.

(F) Administrative Requirements

(1) District Rule 442 Applicability

(a) Any Coating, Coating operation, or facility which is exempt from all or a portion of the VOC limits of this rule shall comply with the provisions of District Rule 442.

(2) Severability

(a) Each provision of this rule shall be deemed severable, and in the event that any provision of this rule is held to be invalid, the remainder of this rule shall continue in full force and effect.

(G) Compliance Provisions and Test Methods

(1) Calculation of VOC Content

(a) For the purpose of determining compliance with the VOC Content limits in Table 1 and Table 2, the VOC Content of a Coating shall be determined by using the procedures described in subsection (i) or (ii) below, as appropriate. If the manufacture does not recommend thinning, the VOC Content must be calculated for the product as supplied. The VOC Content of a Tint Base shall be determined without Colorant that is added after the Tint Base is manufactured. If the coating is a multi-component product, the VOC Content must be calculated as mixed or catalyzed. If the coating contains silanes, siloxanes, or other ingredients that generate ethanol or other VOCs during the curing process, the VOC Content must include the VOCs emitted during curing.

(i) VOC Regulatory

With the exception of Low Solids Coatings, determine the VOC Content in grams of VOC per liter of Coating thinned to the manufacturer's maximum recommendation, excluding the volume of any water and Exempt Compounds. Determine the VOC Content using equation 1 as follows:

Equation 1-VOC Regulatory is the weight of VOC per volume of coating, less the volume of water and exempt compounds.

$$VOC\ Regulatory = \frac{(W_s - W_w - W_{ec})}{(V_m - V_w - V_{ec})}$$

Where:

VOC Regulatory	=	grams of VOC per liter of Coating
W_S	=	weight of volatiles, in grams
W_W	=	weight of water, in grams
W_{ec}	=	weight of Exempt Compounds, in grams
V_m	=	volume of Coating, in liters
V_W	=	volume of water, in liters
V_{ec}	=	volume of Exempt Compounds, in liters

(ii) VOC Actual

For Low Solids Coatings, determine the VOC Content in units of grams of VOC per liter of Coating thinned to the manufacturer's maximum recommendation, including the volume of any water and Exempt Compounds. Determine the VOC Content using equation 2 as follows:

Equation 2:-VOC Actual is the weight of VOC per volume of coating.

$$VOC\ Actual_{ls} = \frac{(W_s - W_w - W_{ec})}{(V_m)}$$

Where:

VOC $Actual_{ls}$	=	The VOC Content of low solids coating in grams of VOC per liter of Coating
W_S	=	weight of volatiles, in grams
W_W	=	weight of water, in grams
W_{ec}	=	weight of Exempt Compounds, in grams
V_m	=	Volume of Coating, in liters

(2) VOC Content of Coatings

(a) To determine the physical properties of a Coating in order to perform the calculations in subsection (G)(1), the reference method for VOC Content is USEPA Method 24, incorporated by reference in subsection (G)(5)(y), except as provided in subsections (G)(3) and (G)(4).

(b) An alternative method to determine the VOC Content of Coatings is South Coast Air Quality Management District Method 304-91 (Revised February 1996), incorporated by reference in subsection (G)(5)(b).

(c) The Exempt Compounds content shall be determined by South Coast Air Quality Management District Method 303-91 (Revised August 1996), Bay Area Air Quality Management District Method 41, or Bay Area Air Quality Management District Method 43, incorporated by reference in subsections (G)(5)(b), (G)(5)(d), and (G)(5)(e).

(d) To determine the VOC Content of a Coating, the manufacturer may use USEPA Method 24, or an alternative method as provided in subsection (G)(3), formulation data, or any other reasonable means for predicting that the Coating has been formulated as intended (e.g., quality assurance checks, record keeping).

(i) However, if there are any inconsistencies between the results of USEPA Method 24 test and any other means for determining VOC Content, the USEPA Method 24 test results will govern, except when an alternative method is approved as specified in subsection (G)(3). The APCO may require the manufacturer to conduct a USEPA Method 24 analysis.

(3) Alternative Test Methods

(a) Other test methods demonstrated to provide results that are acceptable for purposes of determining compliance with subsection (G)(2), after review and approved in writing by the District, CARB, and USEPA, may also be used.

(4) Methacrylate Traffic Marking Coatings

(a) Analysis of methacrylate multicomponent Coatings used as Traffic Marking Coatings shall be conducted according to a modification of USEPA Method 24 (40 CFR 59, subpart D, Appendix A), incorporated by reference in subsection (G)(5)(l).

(b) This method has not been approved for methacrylate multicomponent Coatings used for other purposes than as Traffic Marking Coatings or for other classes of multicomponent Coatings.

(5) Test Methods: The following test methods are incorporated by reference herein, and shall be used to test Coatings subject to the provisions of this rule:

(a) Acid Content of Coatings: The acid content of a coating shall be determined by ASTM Designation D 1613-06, "Standard Test Method for Acidity in Volatile Solvents and Chemical Intermediates Used in Paint, Varnish, Lacquer, and Related Products".

(b) Alternative VOC Content of Coatings: The VOC Content of Coatings may be analyzed either by U.S. EPA Method 24 or South Coast Air Quality Management District Method 304-91 (Revised 1996), "Determination of Volatile Organic Compounds (VOC) in Various Materials," *South Coast Air Quality Management District Laboratory Methods of Analysis for Enforcement Samples*.

(c) Aluminum Roof Coatings: The metallic content of the Coating shall be determined by South Coast Air Quality Management District Method 318-95, "Determination of Weight Percent Elemental Metal in Coatings by X-Ray Diffraction".

(d) Exempt Compounds--Parachlorobenzotrifluoride (PCBTF): The Exempt Compound parachlorobenzotrifluoride, shall be analyzed as an exempt compound for compliance with Section (G) by Bay Area Air Quality Management District Method 41, "Determination of Volatile Organic Compounds in Solvent Based Coatings and Related Materials Containing Parachlorobenzotrifluoride," *Bay Area Air Quality Management District Manual of Procedures*, Volume III, adopted 12/20/95.

(e) Exempt Compounds--Siloxanes: Exempt compounds that are cyclic, branched, or linear completely methylated siloxanes, shall be analyzed as Exempt Compounds for compliance with Section (G) by Bay Area Air Quality Management District Method 43, "Determination of Volatile Methylsiloxanes in Solvent-Based Coatings, Inks, and Related Materials," *Bay Area Air Quality Management District Manual of Procedures*, Volume III, adopted 11/6/96.

(f) Faux Finishing Coating: The metallic content of the Coating shall be determined by South Coast Air Quality Management District Method 318-95, "Determination of Weight Percent Elemental Metal in Coatings by X-Ray Diffraction".

(g) Flame Spread Index: The flame spread index of a fire-retardant Coating shall be determined by ASTM Designation E 84-07, "Standard Test Method for Surface Burning Characteristics of Building Materials".

(h) Fire Resistance Rating: The fire resistance rating of a fire-resistive Coating shall be determined by ASTM Designation E 119-07, "Standard Test Methods for Fire Tests of Building Construction Materials".

((i) Gloss Determination: The gloss of a Coating shall be determined by ASTM Designation D 523-89 (1999), "Standard Test Method for Specular Gloss".

(j) Hydrostatic Pressure for Basement Specialty Coatings: ASTM D7088-04, "Standard Practice for Resistance to Hydrostatic Pressure for Coatings Used in Below Grade Applications Applied to Masonry.

(k) Metallic Pigmented Coating: The metallic content of a Coating shall be determined by South Coast Air Quality Management District Method 318-95, "Determination of Weight Percent Elemental Metal in Coatings by X-Ray Diffraction," *South Coast Air Quality Management District Laboratory Methods of Analysis for Enforcement Samples*.

(l) Methacrylate Traffic Marking Coatings: The VOC Content of methacrylate multicomponent Coatings used as Traffic Marking Coatings shall be analyzed by the procedures in 40 CFR part 59, subpart D, appendix A, "Determination of Volatile Matter Content of Methacrylate Multicomponent Coatings Used as Traffic Marking Coatings" (September 11, 1998).

(m) Mold and Mildew Growth for Basement Specialty Coatings: ASTM D3273-00, "Standard Test Method for Resistance to Growth of Mold on the Surface of Interior Coatings in an Environmental Chamber" and ASTM D3274-95, "Standard Test Method for Evaluating Degree of Surface Disfigurement of Paint Films by Microbial (Fungal or Algal) Growth or Soil and Dirt Accumulation".

(n) Other Exempt Compounds: The content of compounds exempt under U.S. EPA Method 24 shall be analyzed by South Coast Air Quality Management District Method 303-91 (Revised 1996), "Determination of Exempt Compounds," *South Coast Air Quality Management District Laboratory Methods of Analysis for Enforcement Samples*.

(o) Pre-Treatment Wash Primer: ASTM D1613-06, “Standard Test Method for Acidity in Volatile Solvents and Chemical Intermediates Used in Paint, Varnish, Lacquer, and Related Products”.

(p) Reactive Penetrating Sealer: Chloride Screening Applications: National Cooperative Highway Research Report 244 (1981), “Concrete Sealers for the Protection of Bridge Structures”.

(q) Reactive Penetrating Sealer Water Repellency: ASTM C67-07, “Standard Test Methods for Sampling and Testing Brick and Structural Clay Tile”; or ASTM C97-02, “Standard Test Methods for Absorption and Bulk Specific Gravity of Dimension Stone”; or ASTM C140-06, “Standard Test Methods for Sampling and Testing Concrete Masonry Units and Related Units”.

(r) Reactive Penetrating Sealer Water Vapor Transmission: ASTM E96/E96M-05, “Standard Test Method for Water Vapor Transmission of Materials”.

(s) Stone Consolidants: ASTM E2167-01, “Standard Guide for Selection and Use of Stone Consolidants”.

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(t) Surface Chalkiness: The chalkiness of a surface shall be determined using ASTM Designation D 4214-07, “Standard Test Methods for Evaluating the Degree of Chalking of Exterior Paint Films”.

(u) Tub and Tile Refinish Coating Abrasion Resistance: ASTM D 4060-07, “Standard Test Methods for Abrasion Resistance of Organic Coatings by the Taber Abraser”.

(v) Tub and Tile Refinish Coating Adhesion: ASTM D 4585-99, “Standard Practice for Testing Water Resistance of Coatings Using Controlled Condensation” and ASTM D3359-02, “Standard Test Methods for Measuring Adhesion by Tape Test” (see Section (B), Tub and Tile Refinish Coating.

(w) Tub and Tile Refinish Coating Hardness: ASTM D 3363-05, “Standard Test Method for Film Hardness by Pencil Test”.

(x) Tub and Tile Refinish Coating Water Resistance: ASTM D 4585-99, “Standard Practice for Testing Water Resistance of Coatings Using Controlled Condensation” and ASTM D714-02e1, “Standard Test Method for Evaluating Degree of Blistering of Paints”.

(y) VOC Content of Coatings: The VOC Content of a Coating shall be determined by USEPA Method 24 as it exists in appendix A of 40 *Code of Federal Regulations* (CFR) part 60, "Determination of Volatile Matter Content, Water Content, Density, Volume Solids, and Weight Solids of Surface Coatings".

(z) Waterproofing Membrane: ASTM C836-06, "Standard Specification for High Solids Content, Cold Liquid-Applied Elastomeric Waterproofing Membrane for Use with Separate Wearing Course".

[SIP: See SIP Table at
http://www.avaqmd.ca.gov/Modules/ShowDocument.aspx?documentid=921]

Table 1
VOC CONTENT LIMITS FOR ARCHITECTURAL COATINGS

Limits are expressed in grams of VOC per liter[a] of Coating thinned to the manufacturer's maximum recommendation, excluding the volume of any water, Exempt Compounds, or Colorant added to tint bases. "Manufacturer's maximum recommendation" means the maximum recommendation for thinning that is indicated on the label or lid of the Coating container.

Coating Category	Effective 03/18/2003	Effective 06/18/2003	Effective, 01/01/2004	Effective 6/18/2014
Primary Coatings				
Flat Coatings	250	100		50
Nonflat Coatings	250	150		100
Nonflat-High Gloss Coatings	250			150
Specialty Coatings				
Aluminum Roof Coatings				400
Basement Specialty Coatings				400
Bituminous Roof Coatings	420	300		50
Bituminous Roof Primers	420	350		
Bond Breakers	350			
Concrete Curing Compounds	350			
Concrete/Masonary Sealers				100
Driveway Sealers				50
Dry Fog Coatings	400			150
Faux Finishing Coatings	350			
Fire Resistive Coatings	350			
Floor Coatings	400	250		100
Form-Release Compounds		250		
Graphic Arts Coatings (Sign Paints)	500			
High Temperature Coatings		420		
Industrial Maintenance Coatings	420		250	
Low Solids Coatings	120_a			
Magnesite Cement Coatings	450			
Mastic Texture Coatings	300			100
Metallic Pigmented Coatings	500			
Multi-Color Coatings	250			
Pre-Treatment Wash Primers	780	420		
Primers, Sealers, and Undercoaters	350	200		100
Reactive Penetrating Sealers				350
Recycled Coatings		250		
Roof Coatings	300	250		50
Rust Preventative Coatings		400		250
Shellacs:				
Clear	730			
Opaque	550			
Specialty Primers, Sealers, and Undercoaters	350			100
Stains	350	250		
Stone Consolidants				450
Swimming Pool Coatings	340			
Traffic Marking Coatings	150			100
Tub and Tile Refinish Coatings				420
Waterproofing Membranes				250
Wood Coatings				275
Wood Preservatives	350			
Zinc-Rich Primers				340
a: Limit is expressed as VOC Actual				

Table 2
VOC CONTENT LIMITS FOR ARCHITECTURAL COATINGS

Effective 06/18/14 the coating categories in Table 2 are eliminated and will be subject to the VOC limit of the applicable category in Table 1, except as provided in Section (C)(2), (C)(3), and (C)(5).

Limits are expressed in grams of VOC per liter of Coating thinned to the manufacturer's maximum recommendation, excluding the volume of any water, Exempt Compounds, or Colorant added to tint bases. "Manufacturer's maximum recommendation" means the maximum recommendation for thinning that is indicated on the label or lid of the Coating container.

Coating Category	Effective 06/18/14
Antenna Coatings	530
Antifouling Coatings	400
Clear Wood Coatings	
Clear Brushing Lacquers	680
Lacquers (including lacquer sanding sealers)	550
Sanding Sealers (other than lacquer sanding sealers)	350
Varnishes	350
Fire-Retardant Coatings:	
Clear	650
Opaque	350
Flow Coatings	420
Quick-Dry Enamels	250
Quick-Dry Primers, Sealers, and Undercoaters	200
Swimming Pool Repair and Maintenance Coatings	340
Temperature-Indicator Safety Coatings	550
Waterproofing Sealers	250
Waterproofing Concrete/Masonry Sealers	400

ANTELOPE VALLEY AIR POLLUTION CONTROL DISTRICT

Rule 1120.
Asphalt Pavement Heaters

(Adopted August 4, 1978)

A person shall not operate an asphalt pavement surface heater or an asphalt heater-remixer for the purpose of maintaining, reconditioning, reconstructing or removing asphalt pavement unless all of the following requirements are met:

a. Black or gray smoke emissions of more than 60 consecutive seconds duration shall not be discharged to the atmosphere and in aggregate, black or gray smoke emissions shall not exceed a total of three minutes in any one hour of heater operation. For the purpose of this rule, black or gray smoke is to be viewed by an observer at the point of greatest opacity.

b. Visible emissions of more than 40 percent opacity, other than black or gray smoke, shall not be discharged to the atmosphere for a period or periods totaling more than 3 minutes in any one hour. For the purpose of this rule, visible emissions are to be viewed by an observer at a point no lower than 36 inches above the pavement.

c. All units of equipment are fired with gaseous fuels that do not contain in excess of 80 ppm by volume of sulfur compounds calculated as H_2S, or with diesel fuels that do not contain more sulfur than specified by the California Air Resources Board.

d. Grease, crack pouring materials or oily substances that burn or produce smoke are removed by mechanical grinding, by cold planing or other mechanical means prior to the use of the heating equipment on the contaminated area.

e. Asphalt pavement at the work site is cleared of paper, wood, vegetation and other combustible refuse prior to operation of the heating equipment.

f. The Executive Officer is notified of an operation using pavement heaters within 10 days after a contract is signed authorizing such work and again at least 24 hours before an operation starts. Each notification shall describe the location, estimated starting time and an estimate of the time to complete the work.

g. The equipment is operated only during days on which open burning is allowed. However, an operation that begins on a day when open burning is allowed, may be continued on successive days whether open burning is allowed or not allowed. Information concerning whether a proposed operating day meets the criteria specified in this subparagraph (g) may be obtained from the Executive Officer or his authorized representative.

[SIP: Approved 9/28/81, 46 FR 47451, 40 CFR 52.220(c)(65)(ii)]

ANTELOPE VALLEY AIR POLLUTION CONTROL DISTRICT

Rule 1121
Control of Nitrogen Oxides from Residential Type, Natural Gas-Fired Water Heaters

(Adopted December 1, 1978)(Amended March 10, 1995)

(a) Applicability

This rule applies to manufacturers, distributors, retailers, and installers of natural gas-fired water heaters, with heat input rates less than 75,000 Btu per hour.

(b) Definitions

For the purpose of this rule:

1. BTU means British thermal unit or units.
2. EXECUTIVE OFFICER means the South Coast Air Quality Management District Executive Officer or designee.
3. HEAT OUTPUT means the product H_o as defined in Section 9.3 of the Protocol.
4. INDEPENDENT TESTING LABORATORY means a testing laboratory that meets the requirements of District Rule 304, subdivision (k) and is approved by the District to conduct certification testing under the Protocol.
5. MOBILE HOME WATER HEATER means a closed vessel manufactured exclusively for mobile home use in which water is heated by combustion of gaseous fuel and is withdrawn for use external to the vessel at pressures not exceeding 160 psig, including the apparatus by which heat is generated and all controls and devices necessary to prevent water temperatures from exceeding 210^{o}F (99^{o}C).
6. NO_x EMISSIONS means the sum of nitric oxide and nitrogen dioxide in the flue gas, collectively expressed as nitrogen dioxide.
7. PROTOCOL means South Coast Air Quality Management District Protocol: *Nitrogen Oxides Emissions Compliance Testing for Natural Gas-Fired Water Heaters and Small Boilers*, January 1995.
8. RATED HEAT INPUT CAPACITY means the heat input capacity specified on the nameplate of the combustion unit. If the combustion unit has been altered or modified such that its maximum heat input is different than the heat input capacity specified on the nameplate, the new maximum heat input shall be considered as the rated heat input capacity.
9. WATER HEATER means a closed vessel other than a mobile home water heater in which water is heated by combustion of gaseous fuel and is withdrawn for use external to the vessel at pressures not exceeding 160 psig, including the apparatus by which heat is generated and all controls and devices necessary to prevent water temperatures from exceeding 210^{o}F (99^{o}C).

(c) Requirements

A person shall not distribute, sell, offer for sale, or install within the South Coast Air Quality Management District:

1. Gas-fired water heaters that:

   (A) Emit nitrogen oxides in excess of 40 nanograms of NO_x (calculated as NO_2) per joule (93 lb per billion Btu) of heat output; or

   (B) Are not certified in accordance with subparagraph (d).

2. Gas-fired mobile home water heaters that:

(A) Emit nitrogen oxides in excess of 50 nanograms of NO_x (calculated as NO_2) per joule (116 lb per billion Btu) of heat output; or

(B) Are not certified in accordance with subparagraph (d).

(d) Certification

1. The manufacturer shall obtain confirmation that each model of water heater complies with the applicable requirements of subdivision (c) from an independent testing laboratory prior to applying for certification. This confirmation shall be based upon emission tests of a randomly selected unit of each model and the Protocol shall be adhered to during the confirmation testing of all water heaters subject to this rule.
2. When applying for certification of water heaters, the manufacturer shall submit to the Executive Officer the following:

   (A) A statement that the model is in compliance with subdivision (c). The statement shall be signed and dated, and shall attest to the accuracy of all statements;

   (B) General Information

      (i) Name and address of manufacturer,

      (ii) Brand name, and

      (iii) Model number, as it appears on the water heater rating plate;

   (C) A description of each model being certified; and

   (D) A source test report verifying compliance with subdivision (c) for each model to be certified. The source test report shall be prepared by the confirming independent testing laboratory and shall contain all of the elements identified in Section 10 of the Protocol for each unit tested. The source test shall have been conducted no more than ninety days prior to the date of submittal to the Executive Officer

3. When applying for certification of water heaters, the manufacturer shall submit the items identified in paragraph (d)(2) no more than ninety days after the date of the source test identified in subparagraph (d)(2)(D).
4. The Executive Officer shall certify a water heater model which complies with the provisions of subdivision (c) and of paragraphs (d)(1), (d)(2), and (d)(3).
5. Certification status shall be valid for three years from the date of approval by the Executive Officer. After the third year, recertification shall be required according to the requirements of paragraphs (d)(1) and (d)(2).
6. The provisions of paragraph (d)(5) shall not apply to any water heater model which is included in a NO_x validation program approved by the Executive Officer. In order to be considered for approval by the Executive Officer, a NO_x validation program must, at a minimum, meet the following criteria:

   (A) The program shall be administered by an entity which has no financial interest in any of the manufacturers participating in the program, or in any parent company or any subsidiary thereof;

   (B) The program shall be administered in association with an efficiency verification program recognized by an agency of the Federal government; and

   (C) The Protocol shall be adhered to for all NO_x emission testing associated with the program and such testing shall be conducted by an independent testing laboratory.

(e) Identification of Complying Heaters

The manufacturer shall display the model number of the water heater complying with subdivision (c) on the shipping

carton and rating plate. The manufacturer shall also display the certification status on the shipping carton and on the water heater.

(f) Enforcement

The Executive Officer may periodically inspect distributors, retailers, and installers of water heaters located in the District and conduct such tests as are deemed necessary to insure compliance with subdivision (c).

(g) Exemptions

The provisions of this rule shall not apply to:

1. Water heaters with a rated heat input capacity of 75,000 Btu per hour or greater.
2. Water heaters used in recreation vehicles.

(h) Compliance Schedule

1. The provisions of District Rule 1121 as adopted December 1, 1978 shall remain in effect through June 30, 1995.
2. The provisions of this revision of Rule 1121 shall become effective July 1, 1995.
3. The certification of one third of each manufacturer's models certified prior to July 1, 1995 shall expire on each of the following dates: July 1, 1996, July 1, 1997, and July 1, 1998.
4. Each manufacturer of currently certified models of water heaters shall submit a compliance plan to the Executive Officer no later than December 31, 1995. The compliance plan shall identify by model number the specific water heater models to have their certification expire in each of the three years identified in paragraph (h)(3). The certification of any water heater model certified prior to July 1, 1995 which is not specifically identified in a compliance plan shall expire July 1, 1996.

RULE 1122
Solvent Degreasers

(Adopted; 03/02/79; Amended: 06/01/79; Amended: 02/01/80; Amended: 07/08/8; Amended: 05/05/89; Amended: 4/05/91)

(a) Applicability

This rule applies to all persons who own or operate remote reservoir cold cleaners, batch-loaded cold cleaners, open-top vapor degreasers, and all types of conveyorized degreasers that carry out solvent cleaning operations with a solvent containing Volatile Organic Compounds (VOCs). Solvent cleaning operations that are regulated by this rule include, but are not limited to, the removal of uncured coatings, adhesives, inks, and contaminants such as dirt, soil, oil, and grease from parts, products, tools, machinery, and equipment.

(b) Definitions

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

1. AIR-SOLVENT INTERFACE is the point of contact between the exposed solvent and air.
2. AIR-VAPOR INTERFACE is the point of contact between the exposed solvent vapor and air.
3. AIR-VAPOR INTERFACE SURFACE AREA
   A. Means the geometric surface area of the open top of the degreaser for OPEN-TOP VAPOR DEGREASERS; or
   B. Means the combined geometric surface areas of the projected plane surfaces of all degreaser openings for CONVEYORIZED DEGREASERS.
4. AIR-SOLVENT INTERFACE SURFACE AREA means the combined geometric surface areas of the projected plane surfaces of all degreaser openings for CONVEYORIZED DEGREASERS.
5. BATCH-LOADED COLD CLEANER is a degreaser that is designed to contain liquid solvent at a temperature below its boiling point and is used for cleani.g objects in a batch-type operation.
6. CONDENSER WATER FLOW SWITCH is a safety switch that turns off the sump heat if condenser water fails to circulate or rises above the design operating temperature.
7. CONVEYORIZED DEGREASER is any degreaser which uses an integral, continuous, mechanical system for moving materials or parts to be cleaned into and out of a solvent liquid or vapor cleaning zone.
8. DRAG-OUT is that solvent carried out of a degreaser that adheres to or is entrapped in the part being removed.
9. DEGREASER is any equipment designed and used for holding a solvent to carry out solvent cleaning operations. Degreasers include, by way of illustration, and not limitation, remote reservoir cold cleaners, batch-loaded cold cleaners, open-top vapor degreasers, and conveyorized degreasers.
10. DRYING TUNNEL is an add-on enclosure extending from the exit area of a conveyorized degreaser which reduces drag-out losses by containing evaporating solvent.
11. EMULSION CLEANER is a liquid which contains a VOC-containing solvent suspended in water.
12. EXEMPT COMPOUNDS are any of the following compounds:
    A. Group I (General)
       chlorodifluoromethane (HCFC-22)
       dichlorotrifluoroethane (HCFC-123)
       tetrafluoroethane (HFC-134a)
       dichlorofluoroethane (HCFC-141b)
       chlorodifluoroethane (HCFC-142b)
    B. Group II (Under Review)
       methylene chloride
       1,1,1-trichloroethane (methyl chloroform)
       trifluoromethane (FC-23)

trichlorotrifluoroethane (CFC-113)
dichlorodifluoromethane (CFC-12)
trichlorofluoromethane (CFC-11)
dichlorotetrafluoroethane (CFC-114)
chloropentafluoroethane (CFC-115).

13. FREEBOARD HEIGHT
    A. Is the distance from the top of the solvent to the top of the tank for BATCH-LOADED COLD CLEANERS; or
    B. Is the distance from the air-vapor interface to the top of the tank for OPEN-TOP VAPOR DEGREASERS; or
    C. Is the distance from either the air-solvent or air-vapor interface to the top of the tank for conveyorized degreasers.
14. FREEBOARD RATIO is the freeboard height divided by the smaller of either the inside length or inside width of the degreaser.
15. HIGH VOLATILITY SOLVENT is a solvent which is not classified as a low volatility solvent.
16. LIQUID LEAK is a VOC-containing liquid leak from the degreaser at a rate of more than three drops per minute or a visible liquid mist.
17. LOW VOLATILITY SOLVENT is a solvent which has an initial boiling point greater than 120oC (248oF) and whose initial boiling point exceeds the maximum operating temperature of the solvent cleaning operation by at least 100oC (180oF).
18. OPEN-TOP VAPOR DEGREASER is any batch-loaded, boiling solvent degreaser.
19. PERSON is any firm, business establishment, association, partnership, corporation or individual, whether acting as principal, agent, employee, or other capacity, including any governmental entity or charitable organization.
20. REFRIGERATED CONDENSER is an emission control device consisting of primary coils which carry a refrigerant to condense solvent vapor from the degreaser bath.
21. REFRIGERATED FREEBOARD CHILLER is an emission control device which is mounted above the water jacket or primary condenser coils, consisting of secondary coils which carry a refrigerant to provide a chilled air blanket above the solvent vapor to reduce emissions from the degreaser bath.
22. REMOTE RESERVOIR COLD CLEANER is any device in which liquid solvent is pumped through a sink-like work area which drains back into an en-closed container while parts are being cleaned.
23. ROTATING BASKET is a perforated or wire mesh cylinder containing parts to be cleaned that is slowly rotated while proceeding through the degreaser.
24. SOLVENT CLEANING OPERATION is the removal of adhesives, inks, uncured coatings, and contaminants, which include, by way of illustration and not limitation, dirt, soil, and grease from parts, products, tools, machinery, and equipment.
25. SOLVENT CONTAINER is that part of the degreaser that is intended to hold the cleaning solvent.
26. SPRAY PUMP CONTROL SWITCH is a safety switch that prevents the spray pump from operating without an adequate vapor level.
27. VAPOR LEVEL CONTROL SWITCH is a safety switch that turns off the sump heat when the solvent vapor level rises above the design operating level.
28. VOLATILE ORGANIC COMPOUND (VOC) is any chemical compound which contains the element carbon, excluding methane, carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates, ammonium carbonate, exempt compounds, and halogenated hydrocarbons.
29. WORKLOAD AREA means:
    A. the plane geometric surface area of the top of the submerged parts basket, or
    B. the combined plane geometric surface area(s) displaced by the submerged part(s), if no parts basket is used.

(c) General Requirements

Any person owning or operating a batch-loaded cold cleaner, an open-top vapor degreaser, or any type of conveyorized degreaser with a VOC-containing solvent shall meet the basic equipment and operating requirements as set forth below.

1. Basic Equipment Requirements
    A. One of the following types of covers shall be used for open-top vapor degreasers and batch-loaded cold cleaners which are heated, agitated, or use high volatility solvents:

i. Roll-Top Cover;
ii. Canvas Curtain Cover;
iii. Guillotine (Biparting) Cover;
iv. Any other cover that slides off the degreaser in a horizontal motion and is designed such that it can be opened or closed without disturbing the vapor layer or the solvent surface.

B. All degreasers shall be fitted with an apparatus or cover which prevents escape of solvent vapors when the degreaser is not in operation.
C. Use a facility or device for draining cleaned parts such that the drained solvent or drag-out is returned to the degreaser.

2. Basic Operating Requirements
A. The degreaser cover shall be operated in accordance with the manufacturer's specifications and shall be closed at all times except while processing work or performing maintenance on the degreaser.
B. The parts to be cleaned shall be racked in a manner that will minimize the drag-out losses.
C. Parts shall be drained immediately after the cleaning, until one of the following conditions exists:
i. At least 15 seconds have elapsed; or
ii. Dripping of solvent ceases; or
iii. The parts become visibly dry.
D. The water separator shall be maintained in order to prevent water from returning to the surface of the boiling solvent sump or from becoming visibly detectable in solvent exiting the water separator.
E. The solvent container shall be free of all liquid leaks. Auxiliary degreaser equipment, such as pumps, water separators, steam traps, or distillation units shall not have any liquid leaks, and visible tears and cracks. Any liquid leak, visible tear, or crack detected pursuant to the provisions of this subparagraph shall be repaired within one (1) calendar day, or the degreaser shall be drained of all solvent and shut down until replaced or repaired.
F. All waste solvents shall be stored in properly identified, sealed containers and handled and disposed of in accordance with local, state, and federal regulations.
G. Solvent flow cleaning shall be done within the vapor zone and consist of a liquid stream rather than a fine, atomized, or shower-type spray. Solvent flow shall be directed downward to avoid turbulence at the air-vapor or air-solvent interface and to prevent liquid solvent from splashing outside of the degreaser.
H. Degreasing of porous or absorbent materials, such as cloth, leather, wood, or rope, is prohibited.
I. Solvent agitation, where necessary, shall be carried out only by pump recirculation, ultrasonics, a mixer, or by air agitation. Air agitation shall be carried out under the following conditions:
i. The air agitation unit shall be equipped with a gauge and a device that limits air pressure into the degreaser to less than two pounds per square inch gauge; and
ii. The cover must remain closed while the air agitation system is in operation.
J. The vertical speed of a powered hoist or conveyor, if one is used, shall not be more than 3.4 meters per minute (11.2 feet per minute) when lowering and raising parts into the degreaser.
K. The average draft rate in the work room, as measured parallel to the plane of the degreaser opening, shall not exceed 9.1 meters per minute (30 feet per minute), unless necessary to meet Occupational Safety and Health Administration (OSHA) requirements.
L. Ventilation fans shall not be positioned in such a way as to direct air flow near the degreaser openings.
M. The air ventilation rate in a hood, enclosure, or from a lip exhaust to a hood or enclosure shall not exceed 20 cubic meters per minute per square meter of air-vapor or air-solvent interface surface area, unless necessary to meet OSHA requirements.

(d) Batch-Loaded Cold Cleaners

In addition to the General Requirements of section (c), any person owning or operating a batch-loaded cold cleaner shall also meet all of the following:

1. The applicable operating requirements of section (d) and paragraph (c)(2) shall be legibly written, and permanently and conspicuously posted on or near the degreaser in such a manner that it is conveniently available to the operator for reference purposes;
2. A degreaser loaded with a low volatility solvent must have a freeboard ratio of at least 0.50,
3. A degreaser loaded with a high volatility solvent shall be fitted with a drainage facility inside the degreaser and

have either:

A. a water cover over the surface of the solvent if the solvent has a negligible solubility in water and has a density greater than that of water; or
B. a freeboard ratio of at least 0.75.

(e) Open-Top Vapor Degreasers

In addition to the General Requirements of section (c), any person owning or operating an open-top vapor degreaser shall also meet all of the following:

1. The applicable operating requirements of paragraph (e)(6) and paragraph (c)(2) shall be legibly written, and permanently and conspicuously posted on or near the degreaser in such a manner that it is conveniently available to the operator for reference purposes;
2. Installation of the following safety switches on the degreaser:
   A. Vapor level control switch;
   B. Condenser water flow switch, for water-cooled degreasers; and
   C. Spray pump control switch, for solvent flow cleaning.
3. A freeboard ratio of:
   A. at least 0.75, for degreasers with an inside length or width equal to or greater than 10 feet,
   B. at least 1.0, for all other open-top vapor degreasers.
4. Open-top vapor degreasers which have air-vapor interface surface areas of more than 1.0 square meter (10.8 square feet) shall be equipped with:
   A. A refrigerated freeboard chiller, designed such that the refrigerant temperature at the degreaser outlet does not exceed 4.4oC (40oF), or
   B. A carbon adsorption system pursuant to the provisions of section (g), or
   C. An enclosed batch-type design, with a programmable hoist, and a freeboard ratio of at least 1.0 regardless of the requirements of subparagraph (c)(1)(A) and paragraph (e)(5).
5. In addition to the requirements in paragraph (e)(4) above, an open-top vapor degreaser which has an air-vapor interface surface area of more than 2.0 square meters (21.5 square feet) shall have automated, powered, or mechanically-assisted covers that slide off the degreaser in a horizontal motion.
6. Specific Operating Requirements for Open-Top Vapor Degreasers:
   A. When equipped with a lip exhaust system, the exhaust fan shall be off whenever the degreaser is covered;
   B. The workload area shall not exceed more than half of the degreaser's air-vapor interface surface area. If the inside length or width of the degreaser is equal to or greater than 10 feet, the workload area may exceed half of the degreaser's open-top area provided the hoist speed, notwithstanding (c)(2)(J), while lowering and raising parts, does not exceed 1.7 meters per minute (5.5 feet per minute);
   C. At start up, the refrigerated condenser and the refrigerated freeboard chiller shall be turned on either simultaneously or before the sump heater is turned on. At shutdown, the sump heater shall be turned off, either simultaneously or before the condenser water and refrigerated freeboard chiller are turned off. The degreaser must be covered whenever the primary condenser is turned off;
   D. The workload shall be degreased in the vapor zone until condensation ceases.

(f) Conveyorized Degreasers

In addition to the General Requirements of section (c), any person owning or operating a conveyorized degreaser shall meet all of the following requirements:

1. The applicable operating requirements of section (f) and paragraph (c)(2) shall be legibly written, and permanently and conspicuously posted on or near the degreaser in such a manner that it is conveniently available to the operator for reference purposes;
2. Install a high vapor cutoff thermostat with manual reset;
3. A freeboard ratio of at least 0.75;
4. Use of a drying tunnel that is connected to the main control enclosure, or use of other means such as a rotating or tumbling basket, that reduces drag-out losses;
5. Construct entrances and exits that have an average clearance between each part and the edge of the degreaser opening of less than 10 centimeters (3.9 inches) or less than 10 percent of the width of the opening;

6. Conveyorized degreasers which have air-vapor or air-solvent interface surface areas of more than 1.0 square meter (10.8 square feet), but less than or equal to 2.0 square meters (21.6 square feet), shall have either:
    A. Refrigerated freeboard chiller, designed such that the refrigerant temperature at the degreaser outlet does not exceed 4.4oC (40oF); or
    B. A carbon adsorption system pursuant to the provisions of section (g).
7. Conveyorized degreasers which have air-vapor or air-solvent interface surface areas of more than 2.0 square meters (21.6 square feet) shall have either:
    A. A carbon adsorption system pursuant to the provisions of section (g); or
    B. A below-freezing refrigerated freeboard chiller, designed such that the refrigerant temperature at the degreaser outlet does not exceed -20oC (-4oF).

(g) Remote Reservoir Cold Cleaners

Any person owning or operating a remote reservoir cold cleaner shall meet the following requirements:

1. The solvent vapors shall be prevented from escaping from the solvent container by means of closing a cover or a device, such as a valve, when the remote reservoir is not being used, cleaned, or repaired,
2. The average draft rate in the work room, as measured parallel to the plane of the degreaser opening, shall not exceed 9.1 meters per minute (30 feet per minute), unless necessary to meet Occupational Safety and Health Administration (OSHA) requirements,
3. The solvent container shall be free of all liquid leaks,
4. Solvent flow cleaning shall be done within the vapor zone and consist of a liquid stream rather than a fine, atomized, or shower-type spray. Solvent flow shall be directed downward to avoid turbulence at the air-vapor or air-solvent interface and to prevent liquid solvent from splashing outside of the container;
5. Degreasing of porous or absorbent materials, such as cloth, leather, wood, or rope, is prohibited;
6. All waste solvents shall be stored in properly identified, sealed containers and handled and disposed of in accordance with local, state, and federal regulations;
7. The solvent container shall be free of all liquid leaks. Auxiliary equipment, such as pumps or distillation units, shall not have any liquid leaks, and visible tears and cracks. Any liquid leak, visible tear, or crack detected pursuant to the provisions of this paragraph shall be repaired within one (1) calendar day, or the degreaser shall be drained of all solvent and shut down until replaced or repaired.

(h) Carbon Adsorption System Requirements

Any person owning or operating a carbon adsorption system, in association with any degreaser covered under this rule, shall meet the following requirements:

1. The carbon adsorption system shall have a hood or enclosure with a delivery system or ductwork designed to collect degreaser emissions and to vent them to a carbon adsorption system with a control efficiency of at least 90 percent in terms of organic input to the bed;
2. The output from the carbon adsorption system shall not be more than 25 parts per million (ppm), calculated as carbon;
3. The hood or enclosure shall have a ventilation rate between 15 to 20 cubic meters per minute per square meter of air-vapor or air-solvent interface surface area (49.2 to 65.6 cubic feet per minute per square foot of air-vapor or air-solvent interface surface area), unless otherwise required to meet OSHA standards.

(i) Compliance Test Methods

1. The VOC content of materials subject to the provisions of this rule shall be determined by the EPA Reference Method 24 (Determination of Volatile Matter Content, Water Content, Density Volume Solids, and Weight Solids of Surface Coatings, Code of Federal Regulations Title 40, Part 60, Appendix A). The exempt compounds' content shall be determined by South Coast Air Quality Management District (SCAQMD) Laboratory Methods of Analysis for Enforcement Samples - Section III, Method 22.
2. The efficiency of the control device and the VOC content measured and calculated as carbon in the control device exhaust gases shall be determined by EPA Test Methods 25 and 25A, or SCAQMD Method 25.1 (Determination of Total Gaseous Non-Methane Organic Emissions as Carbon).

3. The initial boiling point of solvents shall be determined by ASTM Method D-1078-78, "Standard Test Method for Distillation Range of Volatile Organic Liquids."
4. Measurements of ventilation rate in a hood or enclosure shall be done according to EPA Test Methods 2, 2A, 2C, or 2D. SCAQMD Method 1.1 shall be used to measure the number of traverse points.
5. Measurements of average workroom draft rate shall be done parallel to the plane of the degreaser opening with a thermistor anemometer with an accuracy within ±2 feet per minute and a calibration traceable to the National Institute of Standards and Technology.

(j) Effective Date

All provisions of this rule, as Amended on May 5, 1989, shall remain in effect until May 5, 1991. All persons subject to this rule shall comply with the applicable provisions on May 5, 1991, except equipment modifications, which require a permit to construct, shall comply with the applicable provisions no later than July 1, 1992.

(k) Recordkeeping

Records shall be maintained pursuant to Rule 109 for all applications subject to this rule, including those exempted under section (l).

(l) Exemptions

The provisions of this rule shall not apply to:

1. Cleaning solvents that have a VOC content of 2 percent or less by volume, based on the total volume of the material as used.
2. Notwithstanding the provisions of this paragraph, use of emulsion cleaners shall not be subject to the requirements of subparagraph (c)(2)(C) provided the parts are immediately rinsed with water.
3. Except for subparagraphs (c)(1)(B), (c)(2)(A), and (c)(2)(F), solvent cleaning operations carried out in batch-loaded cold cleaners with open-top surface areas less than 0.1 square meter (1 square foot) and solvent usage less than one (1) gallon per day, shall not be subject to the provisions of this rule.
4. Degreaser units using exempt solvent blends that contain less than 10 percent VOC by volume.

[SIP: Submitted as amended 4/5/91 on 12/31/93; Approved 11/4/96, 61 FR 56627, 40 CFR 52.220(c)(193)(A)(3); Approved 10/3/84, 49 FR 39057, 40 CFR 52.220(c)(148)(vi)(B); Conditional Approval _____, _____, 40 CFR 52.232(a)(13)(i)(B); Approved 1/21/81, 46 FR 5965, 40 CFR 52.220(c)(67)(i)(A)]

(**Adopted**: 07/06/79; **Amended**: 5/07/82; **Amended**: 01/06/84; **Amended**: 06/01/84; **Amended**: 01/09/87; **Amended**: 2/06/87; **Amended**: 04/03/87; **Amended** 05/05/89; **Amended**: 03/02/90; **Amended**: 04/06/90; **Amended**: 06/01/90; **Amended**: 11/02/90; **Amended**: 12/07/90; **Amended**: 08/02/91; **Amended** 03/06/92; **Amended**: 12/04/92; **Amended**: 12/10/93; **Amended**: 1/13/95; **Amended**: 12/13/96; **Amended:** 03/20/07; **Amended:** 08/20/13)

RULE 1124
Aerospace Assembly and Component Manufacturing Operations

(A) General

(1) Purpose

(a) To reduce Volatile Organic Compounds (VOC) emissions from aerospace assembly and component manufacturing operations.

(2) Applicability

(a) This rule applies to any operation associated with manufacturing and assembling products for Aircraft and Space Vehicles. The affected industries include commercial and military Aircraft, satellite, space shuttle and rocket manufacturers and their subcontractors.

(b) This rule also applies to maskant applicators, Aircraft refinishers, Aircraft Fastener Manufacturers, Aircraft operators, and Aircraft maintenance and service facilities.

(B) Definitions

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

(1) Ablative Coating – A Coating that chars when exposed to open flame or extreme temperatures, as would occur during the failure of an engine casing or during aerodynamic heating. The ablative char surface serves as an insulative barrier, protecting adjacent components from the heat or open flame.

(2) Adhesion Promoter Coating – A Coating that is used to promote wetting and forms a chemical bond with a subsequently applied Sealant or other elastomer.

(3) Adhesive – Any substance that is used to bond one surface to another surface by attachment.

(4) Adhesive Bonding Primer – A Primer applied in a thin film to Aerospace Components for the purpose of corrosion inhibition and increased adhesive bond strength by attachment.

(5) Aerosol Coating Product – A pressurized Coating product containing pigments or resins that is dispensed by means of a propellant, and is packaged in a disposable can for hand-held application.

(6) Aerospace Component – The raw material, partial or completed fabricated part, assembly of parts, or completed unit of any Aircraft or Space Vehicle and includes integral equipment such as models, mock-ups, prototypes, molds, jigs, tooling, hardware jackets, and test coupons.

(7) Aerospace Material – Any Coating, Primer, Adhesive, Sealant, maskant, lubricant, Stripper or hand-wipe cleaning or clean-up solvent used during the manufacturing, assembly, refinishing, maintenance or service of an Aerospace Component.

(8) Air Brush Operations – Application of Aerospace Material with equipment operating at air pressure between 25 psi and 116 psi and an air volume of 0.7 cfm and 1.75, respectively.

(9) Aircraft – Any machine designed to travel through the air, without leaving the earth's atmosphere, whether heavier or lighter than air, including airplanes, balloons, dirigibles, helicopters, and missiles.

(10) Air Pollution Control Officer (APCO) – The person appointed to the position of Air Pollution Control Officer of the District pursuant to the provisions of California Health & Safety Code §40750 and his or her designee.

(11) Antichafe Coating – A Coating applied to areas of moving Aerospace Components which may rub during normal operation.

(12) Anti-Wicking Wire Coating – The outer Coating of a wire which prevents fluid wicking into insulation of the wire.

(13) Barrier Coating – A Coating applied in a thin film to Fasteners to inhibit dissimilar metal corrosion and to prevent galling.

(14) Bearing Coating – A Coating applied to an antifriction bearing, a bearing housing, or the area adjacent to such bearing in order to facilitate bearing function or to protect be material from excessive wear. A material shall not be classified as a Bearing Coating if it can also be classified as a Dry Lubricative Material or a Solid-Film Lubricant.

(15) Bonding Maskant – A temporary Coating used to protect selected areas of aerospace parts from strong acid or alkaline solutions during processing for bonding.

(16) Caulking and Smoothing Compound – Semi-solid materials which are applied by Hand Application Methods and are used to aerodynamically smooth exterior vehicle surfaces or fill cavities such as bolt hole accesses. A material shall not be classified as a Caulking and Smoothing Compound if it can also be classified as a Sealant.

(17) Chemical Agent-Resistant Coating (CARC) – An exterior Topcoat designed to withstand exposure to chemical warfare agents or the decontaminants used on these agents.

(18) Chemical Milling – The removal of metal by chemical action of acids or alkalis.

(19) Chemical Milling Maskant – A Coating applied directly to aluminum components to protect surface areas when Chemical Milling the component with a Type I or Type II Etchant. Type I Chemical Milling Maskants are used with a Type I Etchant and Type II Chemical Milling Maskants are used with a Type II Etchant. This definition does not include Bonding Maskants, Critical Use and Line Sealant Maskants, and Seal Coat Maskants. Additionally, maskants that must be used with a combination of Type I or II Etchants and any of the above types of maskants (i.e., Bonding, Critical Use and Line Sealer, and Seal Coat) are not included. Maskants that are defined as Specialty Coatings are not included in this definition.

(20) Chemical Processing Maskant – A Coating applied directly to an Aerospace Component to protect surface areas when anodizing, aging, bonding, plating, etching, and/or performing other chemical surface operations on the component.

(21) Clear Topcoat – A Topcoat that contains no visible pigments and is uniformly transparent when applied.

(22) Coating – A material that is applied to the surface of an aerospace vehicle or component to form a decorative, protective, or functional solid film, or the solid film itself.

(23) Coating Application Equipment – Equipment used for applying Coating to a substrate. Coating Application Equipment includes Coating distribution lines, Coating hoses, pressure-pots, spray guns, and hand-application equipment, such as hand-rollers, brushes, daubers, spatulas, and trowels.

(24) Commercial Exterior Aerodynamic Structure Primer – A Primer used on aerodynamic components and structures that protrude from the fuselage, such as wings and attached components, control surfaces, horizontal stabilizers, vertical fins, wing-to-body fairings, antennae, and landing gear and doors, for the purpose of extended corrosion protection and enhanced adhesion.

(25) Commercial Interior Adhesive – Materials used in the bonding of passenger cabin interior components. These components must meet the Federal Aviation Administration **(**FAA) fireworthiness requirements.

(26) Compatible Substrate Primer – Either compatible epoxy Primer or Adhesive Primer. Compatible epoxy Primer is a Primer that is compatible with the filled elastomeric Coating and is epoxy based. The Compatible Substrate Primer is an epoxypolyamide Primer used to promote adhesion of elastomeric Coatings such as Impact-Resistant Coatings. Adhesive Primer is a Coating that (1) inhibits corrosion and serves as a Primer applied to bare metal surfaces or prior to Adhesive application, or (2), is applied to surfaces that can be expected to contain fuel. Fuel-Tank Coatings are excluded from this category.

(27) Conformal Coating – A Coating applied to electrical conductors and circuit boards to protect them against electrical discharge damage and/or corrosion.

(28) Corrosion Prevention Compound System – A Coating system that provides corrosion protection by displacing water and penetrating mating surfaces, forming a protective barrier between the metal surface and moisture. Coatings containing oils or waxes are excluded from this category.

(29) Critical Use and Line Sealer Maskant – A temporary Coating, not covered under other maskant categories, used to protect selected areas of aerospace parts from strong acid or alkaline solutions such as those used in anodizing, plating, Chemical Milling and processing of magnesium, titanium, or high-strength steel, high-precision aluminum Chemical Milling of deep cuts, and aluminum Chemical Milling of complex shapes. Materials used for repairs or to bridge gaps left by scribing operations (i.e., line sealer) are also included in this category.

(30) Cryogenic Flexible Primer – A Primer designed to provide corrosion resistance, flexibility, and adhesion of subsequent Coating systems when exposed to loads up to and surpassing the yield point of the substrate at cryogenic temperatures (-275ºF and below).

(31) Cryoprotective Coating – A Coating that insulates cryogenic or subcooled surfaces to limit propellant boil-off, maintain structural integrity of metallic structures during ascent or re-entry, and prevent ice formation.

(32) Cyanoacrylate Adhesive – A fast-setting, single component Adhesive that cures at room temperature. Also known as “super glue.”

(33) District – The Antelope Valley Air Quality Management District, the geographical area of which is described in District Rule 103.

(34) Dry Lubricative Material – Coatings consisting of lauric acid, cetyl alcohol, waxes or other non-cross linked or resin bound materials which act as a dry lubricant or protective coat.

(35) Electric- or Radiation-Effect Coatings – Include electrically conductive Coatings and Radiation-Effect Coatings and Coating systems the uses of which may include prevention of radar detection.

(36) Electronic Wire Coating – The outer electrical insulation Coating applied to tape insulation of a wire specifically formulated to smooth and fill edges.

(37) Electrostatic Discharge and Electromagnetic Interference (EMI) Coating – A Coating applied to Space-Vehicles, missiles, aircraft radomes, and helicopter blades to disperse static energy or reduce electromagnetic interference.

(38) Elevated-Temperature Skydrol-Resistant Commercial Primer – Primer applied primarily to commercial Aircraft (or commercial Aircraft adapted for military use) that must withstand immersion in phosphate ester (PE) hydraulic fluid (Skydrol 500b or equivalent) at the elevated temperature of 150°F for 1,000 hours.

(39) Epoxy Polyamide Topcoat – Coating used where harder films are required or in some areas where engraving is accomplished in camouflage colors.

(40) Exempt Compounds – A compound identified as exempt in 40 CFR 51.100(s).

(41) Facility – Any permit unit, group of permit units, non-permitted equipment or any combination thereof which emits or may emit an Air Pollutant; and belongs to a single major industrial group in the Standard Industrial Classification manual; and is located on a single parcel of land or on contiguous property within the District; and which is owned or operated by the same person or by persons under common control.

(42) Fastener – Any of various devices, including but not limited to, pins, collars, blots, nuts, and rivets for holding together two (2) or more objects or parts.

(43) Fastener Manufacturer – A Facility that coats Aircraft Fasteners, such as pins, collars, bolts, nuts, and rivets, with Solid-Film Lubricants for distribution to other Facilities.

(44) Fire-Resistant (Interior) Coating

(a) For civilian Aircraft, Fire-Resistant Interior Coatings are used on passenger cabin interior parts that are subject to FAA fireworthiness requirements.

(b) For military Aircraft, Fire-Resistant Interior Coatings are used on parts that are subject to the flammability requirements of MIL-STD-1630A and MIL-A-87721.

(c) For space applications, Fire-Resistant Interior Coatings are used on parts that are subject to the flammability requirements of SE-R-0006 and SSP 30233.

(45) Flexible Primer – A Primer that meets flexibility requirements such as those needed for Adhesive Bond Primed Fastener heads or on surfaces expected to contain fuel. The flexible Coating is required because it provides a compatible, flexible substrate over bonded sheet rubber and rubber-type Coatings as well as a flexible bridge between the Fasteners, skin, and skin-to-skin joints on outer Aircraft skins. This flexible bridge allows more Topcoat flexibility around Fasteners and decreases the chance of the Topcoat cracking around the Fasteners. The result is better corrosion resistance.

(46) Flight-Test Coating – A Coating applied to an Aircraft prior to flight testing to protect the Aircraft from corrosion and to provide required marking during flight test evaluation.

(47) Fuel-Tank Adhesive – An Adhesive used to bond components exposed to fuel that must be compatible with Fuel-Tank Coatings.

(48) Fuel-Tank Coating, General – A Coating applied to a fuel tank of an Aircraft to protect it from corrosion and/or bacterial growth.

(49) Fuel-Tank Coating, Rapid Cure – A Fuel-Tank Coating with shortened curing times and decreased sensitivity to low humidity during the curing process.

(50) Hand Application Method – The application of Aerospace Materials by manually held, non-mechanically operated equipment. Such equipment includes paint brushes, hand rollers, caulking guns, trowels, spatulas, syringe daubers, rags, and sponges.

(51) High-Temperature Coating – A Coating that must withstand temperatures of more than 350ºF.

(52) High-Volume, Low-Pressure (HVLP) Spray – An Aerospace Materials application system which is operated with air pressure of between 0.1 and 10 pounds per square inch gauge (psig).

(53) Impact-Resistant Coating – A flexible Coating that protects Aerospace Components, such as Aircraft landing gear, and landing gear compartments, and other surfaces subject to impact and abrasion from runway debris.

(54) Insulation Covering – Material that is applied to foam insulation to protect the insulation from mechanical or environmental damage.

(55) Intermediate Release Coating – A thin Coating applied beneath Topcoats to assist in removing the Topcoat in depainting operations and generally to allow the use of less hazardous depainting methods.

(56) Lacquer Coating – A clear or pigmented Coating formulated with a nitrocellulose or synthetic resin to dry by evaporation without a chemical reaction. Lacquers are resoluble in their original solvent.

(57) Low-Solids Adhesive Coating, Primer or Sealant - An Adhesive Coating, Primer or Sealant which has less than one pound of solids per gallon of material. Such solids are the non-volatiles remaining after a sample is heated at 230ºF (110ºC) for one hour.

(58) Low-Solids Corrosion Resistant Primer – A corrosion resistant polyurethane compatible Primer with enhanced adhesion and rain erosion resistance which contains no more than 45 percent (45%) solids, by weight, as applied.

(59) Metallized Epoxy Coating – A Coating that contains relatively large quantities of flake pigmentation for appearance and/or added protection.

(60) Mold Release Coating – A Coating applied to the surface of a mold to prevent the molded component from sticking to the mold as it is removed.

(61) Non-Structural Adhesive – An Adhesive that bonds non-load-carrying Aircraft components in non-critical applications and is not covered in any other specialty Adhesive categories.

(62) Optical Anti-Reflection Coating – A Coating with a low reflectance in the infrared and visible wavelength range and is used for anti-reflection on or near optical and laser hardware.

(63) Part Marking Coating – Coatings or inks used to make identifying markings on materials, components, and/or assemblies. These markings may be either permanent or temporary.

(64) Phosphate Ester Resistant Ink – A Coating that is used for surface identification or marking which inhibits phosphate ester fluid corrosion.

(65) Photolithographic Maskant – A Coating applied by Photoresist Operation(s) directly to printed circuit boards, and ceramic and similar substrates to protect surface areas from Chemical Milling or Chemical Processing.

(66) Photoresist Operation – A process for the application or development of photoresist masking solution on a substrate, including preparation, soft bake, develop, hard bake, and stripping, and can be generally subdivided as follows:

(a) Negative Photoresist Operation is a process where the maskant hardens when exposed to light and the unhardened maskant is stripped, exposing the substrate surface for Chemical Milling or Chemical Processing.

(b) Positive Photoresist Operation is a process where the maskant softens when exposed to light and the softened maskant is stripped, exposing the substrate surface for Chemical Milling or Chemical Processing.

(67) Pre-Bonding Etchant – An acid or basic substance that is used to increase the strength of an adhesive bond by chemically altering the substrate surface morphology to increase the bonding surface area of aerospace wire Coatings to the underlying insulation layer.

(68) Pretreatment Coating – A Coating which contains no more than 12 percent (12%) solids, by weight and at least 0.5 percent (0.5%) acid by weight, to provide surface etching and is applied directly to metal surfaces to provide corrosion resistance, adhesion, and ease of stripping.

(69) Primer – A Coating applied directly to an Aerospace Component for purposes of corrosion prevention, protection from the environment, functional fluid resistance and/or adhesion of subsequent Coatings, Adhesives, or Sealants.

(70) Primer Compatible with Rain Erosion-Resistant Coating – A Primer to which Rain Erosion-Resistant Coating is applied.

(71) Rain Erosion-Resistant Coating – A Coating that protects leading edges, flaps, stabilizers, and engine inlet lips against erosion caused by rain impact during flight.

(72) Repair Coating – A Coating used to recoat portions of a product which has sustained mechanical damage to the Coating following normal painting operations.

(73) Rework – The inspection, repair, and reconditioning of Aerospace Components subject to this rule.

(74) Rocket Motor Bonding Adhesive – Adhesive used in rocket motor bonding applications.

(75) Rocket Motor Nozzle Coating – A catalyzed epoxy Coating system used in elevated temperature applications on rocket motor nozzles.

(76) Rollable, Brushable or Extrudable Sealant – A single or multi-component polymeric material used to seal many types of joints, gaps, removable panels, and windows where moderate movement is expected. Such material may be applied by rolling brushing extruding or daubing.

(77) Rubber-Based Adhesive – A quick setting contact cement that provides a strong, yet flexible bond between two mating surfaces that may be of dissimilar materials.

(78) Scale Inhibitor Coating – A Coating that is applied to the surface of a part prior to thermal processing to inhibit the formation of tenacious scale.

(79) Screen Print Ink – An ink used in screen printing processes during fabrication of decorative laminates and decals.

(80) Sealant – Viscous semisolid materials that fill voids in order to seal out water, fuel, and other liquids and solids, and in some cases, air movement.

(81) Seal Coat Maskant – An overcoat applied over a maskant to improve abrasion and chemical resistance during production operations.

(82) Silicone Insulation Material – An insulating material applied to exterior metal surfaces for protection from high temperatures caused by atmospheric friction or engine exhaust. These materials differ from Ablative Coatings in that they are not "sacrificial."

(83) Solid-Film Lubricant – A very thin Coating consisting of a binder system containing as its chief pigment material one or more of the following: molybdenum disulfide, graphite, polytetrafluoroethylene (PTFE), or other solids that act as a dry lubricant between faying surfaces.

(84) South Coast Air Quality Management District (SCAQMD) – The air quality district created pursuant to Division 26, Part 3, Chapter 5.5 of the California Health & Safety Code (commencing with §40400).

(85) Space Vehicle – A vehicle designed to travel beyond the earth's atmosphere.

(86) Specialized Function Coating – A Coating that fulfills extremely specific engineering requirements that are limited in application and are characterized by low volume usage. This category excludes Coatings covered in other Specialty Coating categories.

(87) Specialty Coating – A Coating that, even though it meets the definition of a Primer, Topcoat, or self-priming Topcoat, has additional performance criteria beyond those of Primers, Topcoats, and self-priming Topcoats for specific applications. These performance criteria may include, but are not limited to, temperature or fire resistance, substrate compatibility, antireflection, temporary protection or marking, sealing, adhesively joining substrates, or enhanced corrosion protection.

(88) Stencil Coating – An ink or Coating that is rolled, sprayed with an airbrush or touch-up gun, or brushed while using a template to add identifying letters and or numbers to Aerospace Components.

(89) Stripper – A volatile liquid applied to remove cured Aerospace Material or their residues.

(90) Structural Adhesive – Autoclavable – An Adhesive used to bond load-carrying Aircraft components and is cured by heat and pressure in an autoclave.

(91) Structural Adhesive, High Temperature – Autoclavable – An Adhesive used to bond load-carrying Aircraft Components which is cured by heat and pressure in an autoclave, and can withstand service temperatures above 450° F (232° C).

(92) Structural Adhesive – Non-Autoclavable – An Adhesive cured under ambient conditions and is used to bond load-carrying Aircraft components or other critical functions, such as nonstructural bonding in the proximity of engines.

(93) Temporary Protective Coating – A Coating applied to an Aerospace Component to protect it from mechanical and environmental damage during manufacturing.

(94) Thermal Control Coating – A Coating formulated with specific thermal conductive or radiative properties to permit temperature control of the substrate.

(95) Topcoat – A Coating applied over a Primer or other Coating on an aerospace vehicle or component for purposes such as appearance, identification, camouflage, or protection. Topcoats that are defined as Specialty Coatings are not included in this definition.

(96) Touch-Up Operation – The application of Aerospace Materials by brush, air brush, detail HVLP spray equipment outside of a permitted paint enclosure to repair minor surface damage and imperfections after the main Coating process.

(97) Transfer Efficiency – The ratio of the weight or volume of Coating solids adhering to an object to the total weight or volume, respectively, of Coating solids used in the application process, expressed as a percentage.

(98) Type I Etchant – A Chemical Milling etchant that contains varying amounts of dissolved sulfur and does not contain amines.

(99) Type II Etchant – A Chemical Milling etchant that is a strong sodium hydroxide solution containing amines.

(100) Unicoat – A Coating which is applied directly to an Aerospace Component for purposes of corrosion protection, environmental protection, and functional fluid resistance that is not subsequently Topcoated.

(101) United States Environmental Protection Agency (USEPA) – The United States Environmental Protection Agency, the Administrator of the USEPA and his or her authorized representative.

(102) Volatile Organic Compound (VOC) – Any volatile compound containing the element carbon, excluding methane, carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates, ammonium carbonate, and Exempt Compounds as listed in 40 CFR 51.100(s).

(103) Wet Fastener Installation Coating – A Primer or Sealant applied by dipping, brushing, or daubing to Fasteners that are installed before the Coating is cured.

(104) Wing Coating – A corrosion-resistant Coating that is resilient enough to withstand the flexing of the wings.

(C) Requirements

(1) VOC Content of Coatings

(a) A person shall not apply to Aerospace Components any Aerospace Materials, including any VOC-containing materials added to the original Aerospace Materials supplied by the manufacturer, which contain VOC in excess of the limits specified below:

SPECIALTY COATING VOC LIMITS

Grams Per Liter of Coating Less Water and Less Exempt Compounds	
AEROSPACE MATERIALS	**VOC Limit**
PRIMERS	--
General	350
Adhesive Bonding Primers	--
Commercial Aircraft	250
Military Aircraft	805
Commercial Exterior Aerodynamic Structure Primer	650
Compatible Substrate Primer	780
Cryogenic Flexible Primer	645
Elevated-Temperature Skydrol-Resistant Commercial Primer	740
Flexible Primer	640
Low-Solids Corrosion Resistant Primer	350
Primer Compatible with Rain Erosion-Resistant Coating	850
COATINGS	--
Ablative Coating	600
Adhesion Promoter Coating	850
Antichafe Coating	420
Bearing Coating	620
Chemical Agent-Resistant Coating	550
Conformal Coating	750
Cryoprotective Coating	600
Electric- or Radiation-Effect Coating	800
Electrostatic Discharge and Electromagnetic Interference (EMI) Coating	800
Fire-Resistant (Interior) Coating	--
Civilian	650
Military	800
Space	800
Flight-Test Coating	--
Used on Missiles or Single Use Aircraft	420
All Other	840
Fuel-Tank Coating	--
General	420
Rapid Cure	720

High-Temperature Coating	850
Impact-Resistant Coating	420
Intermediate Release Coating	750
Lacquer Coating	830
Metallized Epoxy Coating	700
Mold Release Coatings	780
Optical Anti-Reflection Coating	700
Part Marking Coating	850
Pretreatment Coating	780
Rain Erosion-Resistant Coating	800
Rocket Motor Nozzle Coating	660
Scale Inhibitor Coating	880
Space-Vehicle Coatings, Other: does not include Electric Discharge and EMI Protection Coating or Fire-Resistant (Interior) Coating	1000
Specialized Function Coating	890
Temporary Protective Coating	250
Thermal Control Coating	800
Topcoat	--
Clear	520
Epoxy Polyamide	660
Other	420
Unicoat Coating	420
Wet Fastener Installation Coating	675
Wing Coating	750
Wire Coatings	
Electronic Wire Coating	420
Anti-Wicking	420
Pre-Bonding Etchant	420
Phosphate Ester Resistant Ink	925
ADHESIVES	--
Commercial Interior Adhesive	760
Cyanoacrylate Adhesive	1020
Fuel-Tank Adhesive	620
Non-Structural Adhesive	250
Rocket Motor Bonding Adhesive	890
Rubber-Based Adhesive	850
Space Vehicle Adhesive	800
Structural Adhesive	--
Autoclavable	50
High Temperature - Autoclavable	650
Non-Autoclavable	850
SEALANTS	--
Rollable, Brushable or Extrudable Sealant	280
Fastener Sealant	675

Other	600
MASKANTS	--
Bonding Maskant	1230
Critical Use and Line Sealer Maskant	750
Chemical Milling Maskant	
For use with Type I Etchant	250
For use with Type II Etchant	160
For Chemical Processing *Less water, Exempt Compounds and perchloroethylene (PERC)	250*
Photolithographic Maskant	850
Seal Coat Maskant	1230
LUBRICANTS	--
Fastener Installation Lubricant (applied at time of Aircraft/component assembly)	--
Solid-Film Lubricant	880
Dry Lubricative Material	675
Fastener Lubricative Coating (applied at time of Fastener Manufacture)	--
Solid-Film Lubricant	250
Dry Lubricative Material	120
Barrier Coating	420
Non-Fastener Lubricative Coatings (applied at time of non-Fastener Manufacture)	--
Solid-Film Lubricant	880
Dry Lubricative Materials	675
OTHER	--
Caulking and Smoothing Compound	850
Corrosion Prevention Compound System	710
Insulation Covering	740
Screen Print Ink	840
Silicone Insulation Material	850

(b) Documents shall be provided to the APCO demonstrating that the Unicoat is being used in lieu of the application of a Primer and Topcoat, and the applicant must receive written approval for the use of the Unicoat specifying the conditions of application from the APCO.

(c) For Low-Solids Adhesives, Coatings, Primers or Sealants, the appropriate limits in subparagraph (C)(1)(a) shall be expressed in grams of VOC per liter of material.

(2) Solvent Use, Clean Up, and Stripping

(a) A person shall not use VOC-containing materials for cleaning or clean up, excluding Coating stripping and equipment cleaning unless:

(i) The VOC composite partial pressure is 45 mm Hg or less at a temperature of 20°C (68°F); or

(ii) The material contains 200 grams or less of VOC per liter of material.

(b) A person shall not use Stripper on Aerospace Components unless:

(i) It contains less than 300 grams of VOC per liter of material; or

(ii) The VOC composite partial pressure is 9.5 mm Hg (0.18 psia) or less at 20°C (68°F).

(c) A person shall not atomize any solvent into open air.

(3) Equipment Cleaning Operations

Cleaning of Coating Application Equipment shall comply with provisions of Rule 1171 – *Solvent Cleaning Operations*.

(4) Storage of VOC-Containing Materials

All VOC containing material, used or unused, including but not limited to surface Coatings, thinners, cleanup solvents, or surface preparation materials, and all solvent laden cloth and paper, shall be stored in non-absorbent, non-leaking containers which shall be kept closed at all times except during extraction or introduction of material for mixing, use or storage.

(5) Transfer Efficiency

No person or Facility shall apply Aerospace Material unless it is applied with properly operating equipment or controlled, according to operating procedure specified by the equipment manufacturer or the APCO, and by the use of one of the following methods:

(a) Electrostatic application;

(b) Flow coater;

(c) Roll coater;

(d) Dip coater;

(e) High-Volume, Low-Pressure (HVLP) Spray;

(f) Hand Application Methods;

(g) Such other alternative application methods as are demonstrated to the APCO, using District-approved procedures, to be capable of achieving at least an equivalent Transfer Efficiency to method (C)(5)(e) and for which written approval of the APCO has been obtained; or

(h) Approved air pollution control equipment under paragraph (C)(6).

(6) Control Equipment

Owners and/or operators may comply with provisions of paragraphs (C)(1), (C)(2), and (C)(5) by using approved air pollution control equipment provided that the VOC emissions from such operations and/or materials are reduced in accordance with provisions of (a) and (b) below.

(a) The control device shall reduce emissions from an emission collection system by at least 95 percent (95%), by weight, or by reducing the output of the air pollution control device to less than 50 ppm calculated for carbon with no dilution.

(b) The owner/operator demonstrates that the system collects at least 90 percent (90%), by weight, of the emissions generated by the sources of emissions.

(7) Prohibition of Solicitation of Violations

(a) A person shall not solicit or require any other person to use, in the District, any Aerospace Material or combination of Aerospace Materials to be applied to any Aircraft Component subject to the provisions of this rule that does not meet the limits and requirements of this rule, or of an Alternative Emission Control Plan (AECP) approved pursuant to the provisions of (C)(8).

(b) The requirements of this paragraph shall apply to all written or oral agreements executed or entered into after April 3, 1987.

(8) Alternative Emission Control Plans

(a) An owner/operator may comply with the provisions of paragraph (C)(1) by means of an Alternative Emission Control Plan pursuant to Rule 108 – *Alternative Emission Control Plans*.

(D) Recordkeeping and Reporting Requirements

(1) Recordkeeping

(a) Records shall be maintained pursuant to the requirements of Rule 109 – *Recordkeeping for Volatile Organic Compound Emissions*.

(2) Reporting

(a) Persons who perform qualification acceptance testing on Aerospace Materials with a future compliance date for use in the District shall, on January 1 and July 1 of each year, submit a status report describing the

progress toward the development of Aerospace Materials which satisfy future compliance dates. These reports shall contain, at a minimum:

(i) Manufacturer, product number, VOC content, and applicable Coating category for each of the test candidates;
(ii) Test expenditures for the period;
(iii) Progress on candidates tested during this period;
(iv) Approvals received for Coatings which comply with future compliance dates; and,
(v) Volume of Coatings used in each Coating category for which there is a future compliance date.

(b) Facilities testing Coatings in the same Coating category may submit joint status reports. Once compliance with future compliance dates is achieved and a status report is submitted documenting such, no further status reports need be submitted.

(E) Compliance Procedures and Test Methods

(1) Calculations

(a) For the purpose of determining compliance with VOC content limits specified in section (C), grams of VOC per liter of Aerospace Material shall be determined by using the following formulas as applicable:

(i) For Aerospace Materials not containing reactive diluents, grams of VOC per liter of Coating, less water and less Exempt Compounds shall be determined as follows:

$$G_{VOC/LoC} = \frac{W_s - W_w - W_{es}}{V_m - V_w - V_{es}}$$

Where:

$G_{VOC/LoC}$	=	Grams of VOC per liter of Coating, less water and less Exempt Compounds.
W_s	=	Weight of volatile compounds, in grams.
W_w	=	Weight of water, in grams.
W_{es}	=	Weight of Exempt Compounds, in grams.
V_m	=	Volume of material, in liters.
V_w	=	Volume of water, in liters.
V_{es}	=	Volume of Exempt Compounds, in liters.

(ii) For Aerospace Materials that contain reactive diluents, grams of VOC per liter of coating, less water and less Exempt Compounds shall be determined as follows:

$$G_{VOC/LoC} = \frac{W_s - W_w - W_{es}}{V_m - V_w - V_{es}}$$

Where:

$G_{VOC/LoC}$	=	Grams of VOC per liter of Coating, less Water and less Exempt Compounds.
W_s	=	Weight of volatile compounds evolved during curing and analysis, in grams.
W_w	=	Weight of water evolved during curing and analysis, in grams.
W_{es}	=	Weight of Exempt Compounds evolved during curing and analysis, in grams.
V_m	=	Volume of material prior to reaction, in liters.
V_w	=	Volume of water evolved during curing and analysis, in liters.
V_{es}	=	Volume of Exempt Compounds evolved during curing and analysis, in liters.

(b) Total grams of VOC per liter of Aerospace Material shall be determined using the following formula:

$$G_{VOC/LoC} = \frac{W_s - W_w - W_{es}}{V_m}$$

Where:

$G_{VOC/LoC}$	=	Grams of VOC per liter of Coating
W_s	=	Weight of volatile compounds, in grams.
W_w	=	Weight of water, in grams.
W_{es}	=	Weight of Exempt Compounds, in grams.
V_m	=	Volume of material, in liters.

(c) The VOC composite partial pressure shall be determined as follows:

$$PP_c = \sum_{i=1}^{n} \frac{\frac{W_i}{MW_i} \times VP_i}{\frac{W_w}{MW_w} + \frac{W_e}{MW_e} + \sum_{i=1}^{n} \frac{W_i}{MW_i}}$$

Where:

W_i	=	Weight of the "i"th VOC compound, in grams.
W_w	=	Weight of water, in grams.
W_e	=	Weight of Exempt Compound, in grams.
MW_i	=	Molecular weight of the "i"th VOC compound, in grams per gram-mole.
MW_e	=	Molecular weight of Exempt Compound, in grams per gram-mole.
PP_c	=	VOC composite partial pressure at 20°C, in mm Hg.
VP_i	=	Vapor pressure of the "i"th VOC compound at 20°C,

in mm Hg.

(2) VOC Content of Aerospace Materials

(a) To determine the physical properties of an Aerospace Material in order to perform the calculations in subsection (E)(1), the following reference methods shall be used:

(i) EPA Reference Method 24 (Determination of Volatile Matter Content, Water Content, Density Volume Solids, and Weight Solids of Surface Coatings, Code of Federal Regulations Title 40, Part 60, Appendix A).

a. Analysis done according to EPA Method 24 shall utilize ASTM Method D-2369-95 (Standard Test Method for Volatile Content of Coatings), referenced in EPA Method 24.

b. The exempt solvent content shall be determined using SCAQMD Test Methods 302-91 (Distillation of Solvents from Paints, Coatings and Inks, February 1993) and 303-91 (Determination of Exempt Compounds, August 1996) (SCAQMD "Laboratory Methods of Analysis for Enforcement Samples" manual) or;

(ii) SCAQMD Test Methods 302, 303, and 304 (SCAQMD "Laboratory Methods of Analysis for Enforcement Samples" manual).

(b) The following classes of compounds listed below will be analyzed as Exempt Compounds for compliance with subdivision (C), only at such time as manufacturers specify which individual compounds are used in the Coating formulations and identify the test methods, which, prior to such analysis, have been approved by the USEPA and the SCAQMD, that can be used to quantify the amounts of each Exempt Compound.

(i) 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 sulfur bonds only to carbon and fluorine.

(3) Test Methods

(a) Efficiency of the control device shall be determined according to EPA Method 25, 25A, or SCAQMD Test Method 25.1 (Total Gaseous Non-Methane Emissions, February 1991) or SCAQMD Test Method 25.3 (Clean-Fueled Combustion Sources, March 2000). Emissions determined to exceed any limits established by this rule through the use of either of the above-referenced test methods shall constitute a violation of this rule.

(b) The capture efficiency of the emissions collection system shall be determined by the USEPA method 204A-F and the most recent version of USEPA's *Guidelines for Determining Capture Efficiency* or any other method approved by the USEPA, the California Air Resources Board, and the SCAQMD.

(c) The Transfer Efficiency of alternative Coating application methods shall be determined in accordance with the SCAQMD method "Spray Equipment Transfer Efficiency Test Procedure for Equipment User, May 24, 1989."

(d) The identity and quantity of components in solvents shall be determined in accordance with SCAQMD test method 308-91 (Quantitation of Compounds by Gas Chromatography, February 1993) contained in the SCAQMD "Laboratory Methods of Analysis for Enforcement Samples" manual. The VOC composite partial pressure is calculated using the equation in paragraph (E)(1)(c).

(e) Multiple Test Methods

(i) When more than one test method or set of test methods are specified for any testing, a violation of any requirement of this rule established by any one of the specified test methods or set of test methods shall constitute a violation of the rule.

(f) Any applicable alternative test method may be used so long as such method has been approved by USEPA, CARB and the APCO.

(F) Administrative Requirements

(1) Rule 442 Applicability

(a) Any Aerospace Material or Facility which is exempt from all or a portion of this rule, shall comply with the provisions of Rule 442 – *Usage of Solvents*.

(G) Exemptions

(1) The provisions of paragraph (C)(1) of this rule shall not apply to Aerospace Materials with separate formulations that are used in volumes of less than 20 gallons per year provided that the total of all such formulations applied annually at a Facility is less than 200 gallons.

(2) The provisions of subdivision (C) of this rule shall not apply to a Facility which uses a total of less than three (3) gallons of VOC-containing Aerospace Materials on each and every day of operation.

(3) The provisions of paragraphs (C)(1) and (C)(5) of this rule shall not apply to incidental corrosion maintenance Repair Coating operations at military Facilities, provided that the Coating use at any maintenance repair location within the Facility does not exceed 1.5 gallons per day, and the total Coating usage for such operations at the Facility does not exceed five (5) gallons per day.

(4) The provisions of subparagraph (C)(2)(a) shall not apply to Space Vehicle manufacturing.

(5) The provisions of paragraph (C)(1) shall not apply to clear or translucent Coatings applied on clear or transparent substrates.

(6) The provisions of paragraph (C)(5) shall not apply to Touch-up Operations and Stencil Coatings provided that the Touch-up Operations and Stencil Coatings do not exceed 25 sq. ft. per Aircraft.

(7) The provisions of paragraph (C)(1) shall not apply to the recoating of assembled Aircraft at Rework facilities if original Coating formulations are used.

(8) The provisions of paragraph (C)(1) shall not apply to Adhesives with separate formulations that are used in volumes of less than ten (10) gallons per year.

(9) The provisions of subdivision (C) shall not apply to laboratories which apply Aerospace Materials to test specimens for purposes of research, development, quality control, and testing for production-related operations.

(10) The provisions of paragraph (C)(2) of this rule do not apply to the surface cleaning of solar cells, fluid systems, avionic equipment, and laser optics.

(11) The provisions of subdivision (D)(1) and (C)(5) shall not be applied to the application of materials that contain less than 20 grams per liter of VOC per liter of material.

(12) The provisions of paragraph (C)(5) shall not apply to the use of materials dispensed from airbrush operations provided that the paint reservoir on the air brush is eight (8) ounces or less and that the total amount of Coating used for Air Brush Operations at the Facility does not exceed five (5) gallons per year.

(13) The provisions of this rule shall not apply to Aerosol Coating Products.

See SIP Table at http://www.avaqmd.ca.gov/Modules/ShowDocument.aspx?documentid=921

(**Adopted**: 08/04/89; **Amended**: 12/07/95; **Amended**: 04/11/97; **Amended**: 01/19/10)

RULE 1134
Stationary Gas Turbines

(A) General

(1) Purpose

(a) The purpose of this rule is to limit the emission of oxides of nitrogen (NO_x) and carbon monoxide (CO) from Stationary Gas Turbines.

(2) Applicability

(a) This rule applies to any new or existing Stationary Gas Turbine of 0.3 megawatt (MW) and larger unless the equipment is exempt from this rule pursuant to Section (D) of this rule.

(B) Definitions

(1) "Air Pollution Control Officer (APCO)" – The person appointed to the position of Air Pollution Control Officer of the District pursuant to the provisions of California Health & Safety Code §40750, and his or her designee.

(2) "Chemical Processing Gas Turbine Unit" – A gas turbine unit that vents its exhaust gases into the operating stream of a chemical process.

(3) "Continuous Emissions Monitoring System (CEMS)" – All of the equipment that may be required to meet the data acquisition and availability requirements of this rule, to sample, condition (if applicable), analyze, and provide a record of emissions on a continuous basis.

(4) "Digester Gas" – Fuel containing a minimum of 60 percent process gas, derived from a digester, by volume on a daily average.

(5) "Dry Low NO_x Combustion Technology (DLN)" – Any turbine combustor design which uses multiple staging, air/fuel premixing or other modifications to achieve lower levels of NO_x emissions as compared to conventional combustors.

(6) "Emergency Standby Unit" – Any Stationary Gas Turbine that operates as a mechanical or electrical power source for a facility only when the primary power source has been rendered inoperable due to failure beyond the reasonable control of the operator. A power interruption pursuant to a voluntary interruptible power supply agreement is not to be considered as an emergency loss of primary power. Electricity generated by such a unit cannot be sold.

(7) "Emission Control Equipment" – Add-on technologies which control the turbine's emissions, including, but not limited to, Selective Catalytic Control (SCR), water injection, steam injection, but excluding DLN.

(8) "Emission Control Plan (ECP)" – A plan that shall contain at a minimum District permit or identification number; name of gas turbine manufacturer; model designation; rated brake horsepower; heat rate (BTU/KW-HR), corrected to the HHV for each type of fueling (liquid/gas); type of liquid fuel and/or type of gaseous fuel; hours of operation in the previous one-year period; fuel consumption (cubic feet of gas or gallons of liquid) for the previous one-year period; and a list of all gas turbine units required to be controlled identifying the type of emission control to be applied to such gas turbine units along with documentation showing existing emissions of NO_x and CO.

(9) "Emission Control System Operating Parameters" – Any operating parameter(s) that the District deems necessary to analyze for the determination of compliance. Such parameters include, but are not limited to, the ammonia and gas flow rates, the exhaust temperature for the Selective Catalytic Reduction (SCR), humidity, water injection rate, exhaust gas flow rate and the temperature for water injection.

(10) "Enhanced Emissions Monitoring Device" – Any automated data recording device or system having both data gathering and retrieval capabilities. Such equipment includes, but is not limited to, Continuous Emissions Monitoring Systems (CEMS) and Predictive Emissions Monitoring Systems (PEMS).

(11) "Existing Gas Turbine Unit" – A stationary gas turbine unit that met the following criteria prior to 12/15/09:

(a) Had been issued a valid permit to construct or operate by the District; or

(b) Was in operation pursuant to the provisions of District Rule 219 (D)(2)(a).

(12) "Higher Heating Value (HHV)" – The Higher Heating Value of the fuel.

(13) "Landfill Gas" – Gas derived from a landfill gas extraction system.

(14) "Lower Heating Value (LHV)" – The Lower Heating Value of the fuel.

(15) "Measured NO_x Emissions Concentration" – The concentration of oxides of nitrogen corrected to International Standards Organization (ISO) standard conditions:

$$NO_x = (NO_x \text{ obs})(\text{Pref}/\text{Pobs})^{0.5} (288 \text{ K}/\text{Tamb})^{1.53} \ (e^{19(\text{Hobs}-0.00633)})$$

Where: NO_x = emissions of NO_x at 15 percent oxygen and ISO standard conditions on a dry basis, ppm.
NO_x obs = measured NO_x emissions corrected to 15 percent oxygen on a dry basis, ppm.
Pref = standard reference pressure, (14.696 psia).
Pobs = measured site ambient absolute pressure, psia.
Hobs = measured humidity of ambient air, pounds water per pound dry air.
e = transcendental constant (2.718)
Tamb = measured temperature of ambient air, degrees Kelvin.

or an alternate calculation that corrects to ISO standard conditions and is approved by the APCO.

(16) "Power Augmentation" – An increase in the gas turbine shaft output and/or the decrease in gas turbine fuel consumption by the addition of energy recovered from exhaust heat.

(17) "Predictive Emissions Monitoring System (PEMS)" – All of the equipment necessary to monitor process and control device operational parameters (for example, control device secondary voltages and electric currents) and other information (for example, gas flow rate, oxygen or carbon dioxide concentrations), and calculate and record the mass emissions rate (for example, lb/hr) on a continuous basis.

(18) "Public Service Unit" – A Stationary Gas Turbine used to generate electricity for sale or for use in serving the public.

(19) "Rating" – The continuous MW (megawatt) rating or mechanical equivalent by a manufacturer for gas turbine unit(s) without Power Augmentation.

(20) "Reasonably Available Control Technology (RACT)" – The lowest emission limitation that a particular source is capable of meeting by the application of control technology that is reasonably available considering technological and economic feasibility.

(21) "Selective Catalytic Reduction (SCR)" – A noncombustion control technology that destroys NO_x by injecting a reducing agent (e.g., ammonia) into the flue gas that, in the presence of a catalyst (e.g., vanadium, titanium, or zeolite), converts NO_x into molecular nitrogen and water.

(22) "Shutdown Period" – The period of time during which a unit is taken from an operational to a non-operational status by allowing it to cool down from its operating temperature to ambient temperature as the fuel supply to the unit is completely turned off.

(23) "Startup Period" – The period of time during which a unit is brought from a Shutdown status to its operating temperature and pressure, including the time required by the unit's emission control system to reach full operation.

(24) "Stationary Gas Turbine" or "Unit" – Any gas turbine unit that is gas and/or liquid fueled with or without power augmentation. This unit is either attached to a foundation at a facility or is portable equipment operated at a specific facility for more than 90 days in any twelve-month period. Two or more units powering one shaft shall be treated as one unit.

(25) "Thermal Stabilization Period" – The Startup or Shutdown Period necessary to bring the heat recovery steam generator to the proper operating temperature, not to exceed two hours.

(C) Standards

(1) The owner or operator of any affected Stationary Gas Turbine Unit shall not operate such Unit under load conditions, excluding the Thermal Stabilization Period and Startup and Shutdown Periods, which result in the Measured NO_x Emissions Concentration exceeding the emissions limits set forth below.

(a) For Stationary Gas Turbines the federal NO_x and CO RACT limits in Table 1 apply:

Table 1
NO_x and CO Compliance Limits

Control	Operating hours per year	Rating	NO_x Compliance Limit, ppmv at 15% oxygen		CO Compliance Limit, ppmv at 15% oxygen
			Gas Fuel	Liquid Fuel	
SCR + DLN	> 877	> 10 MW	5	25	200
DLN	> 877	2 – 10 MW	25	65	200
SCR (no DLN available)	> 877	2 – 10 MW	35	65	200
DLN	> 877	< 2 MW	42	50	250
SCR or DLN	< 877	> 10 MW	25	42	200
Any (fired on Digester Gas and/or Landfill Gas)	any	0.3 – 10 MW	25	N/A	200

(b) For the purposes of these emissions limits the following conventions are applicable:

(i) Gas includes natural gas, Digester Gas and Landfill Gas.
(ii) Oil includes kerosene, jet fuel, and distillate. The sulfur content of the oil shall be less than 0.05 percent.
(iii) NO_x = emissions of NO_x, in ppmv, corrected to 15 percent oxygen and ISO standard conditions on a dry basis, averaged over any consecutive 15 minute period.

(2) The owner or operator of any Stationary Gas Turbine subject to (C)(1)(a) shall submit to the APCO for approval, an Emission Control Plan (ECP) for the purpose of establishing compliance with provisions of this rule.

(3) The owner or operator of any Stationary Gas Turbine subject to (C)(1) shall minimize emissions insofar as technologically feasible during Thermal Stabilization Periods.

(D) Exemptions

(1) The provisions of Section (C) of this rule shall not apply to the operation of:

(a) Laboratory gas turbine units used in research and testing for the advancement of gas turbine technology.

(b) Units operated exclusively for fire fighting and/or flood control.

(c) Chemical Processing Gas Turbine Units.

(2) The provisions of this rule, with the exception of Section (F)(2), shall not apply to the operation of Stationary Gas Turbines used under the following conditions:

(a) Emergency Standby Units, and Stationary Gas Turbine Units demonstrated to operate less than 200 hours per calendar year, which have installed and maintained in proper operation a non-resettable engine hour meter.

(b) Portable, turntable, or track mounted turbines whose operation generates intermittent, high velocity air flow for live fire sustainability, lethality, aerodynamic, cookoff, or remote control operation testing only.

(c) Intra facility portable flight-line equipment used to support aircraft systems or start up aircraft power plants.

(E) Administrative Requirements

(1) The ECP required pursuant to section (C)(2) shall, at a minimum, include the following information if such information is applicable:

(a) A list of all Stationary Gas Turbines required to be controlled pursuant to this rule.

(b) For each Stationary Gas Turbine listed:

(i) District identification number, and District permit to operate number;
(ii) Name of the gas turbine manufacturer;
(iii) Equipment model number;
(iv) Manufacturer's rated shaft power output (MW);
(v) Type of liquid fuel and/or type of gaseous fuel;
(vi) HHV for each fuel;
(vii) Heat rate ((Btu/kW-hr), corrected to the HHV) for each type of fuel (gas or liquid) for each turbine;
(viii) Monthly fuel consumption for the previous twelve-month period (cubic feet for gas; gallons for liquid);
(ix) Monthly hours of operation in the previous twelve-month period;
(x) The type of NO_x Emission Control Equipment, including any auxiliary equipment related to the control of emissions, to be applied;
(xi) Documentation showing the current (existing) concentration and mass rate of emissions of NO_x from the unit;
(xii) A schedule with specified increments of progress dates for construction of Emission Control Equipment, operational milestones for implementation of emissions control and/or installation of monitoring equipment; and
(xiii) A final compliance date.

(F) Monitoring and Recordkeeping Requirements

(1) The owner or operator of any Stationary Gas Turbine required to install Emission Control Equipment for compliance with this rule shall:

(a) Install, operate, and maintain in calibration, the following monitoring equipment, as approved by the APCO:

(i) Continuous measurement and recording of Emissions Control System Operating Parameters;
(ii) Continuous measurement and recording of elapsed time of operation; and
(iii) An Enhanced Emissions Monitoring Device.

(b) Notify the APCO, in writing, before issuance of the permit to operate, such information which correlates the Emission Control System Operating Parameters, and PEMS if present, to the associated measured NO_x emissions output. This information will be used to determine compliance with applicable provisions of this rule for non-CEMS-equipped turbines and CEMS-equipped units when the CEMS is not operating properly.

(c) Provide, on an annual basis, compliance testing data and information regarding NO_x emissions. The data shall be corrected to ISO conditions and at 15 percent oxygen on a dry basis; and the percent efficiency (EFF) of each turbine unit.

(2) The owner/operator of any Stationary Gas Turbine shall:

(a) On a daily basis, maintain a turbine operating log that includes, as a minimum, the following information:

(i) The total hours of operation per day;
(ii) The accumulated hours of operation per calendar month;
(iii) The type and quantity of fuel used; and
(iv) The nature of operation of the unit (exempt or non-exempt).

(b) The operating log required to be kept pursuant to this rule shall be kept current and on site for a minimum of two years; and provided to District or state personnel on request.

(G) Notification Requirements for Exempt and Emergency Standby Units

(1) Any Stationary Gas Turbine unit which is exempt or claimed to be exempt pursuant to subsection (D)(2) shall:

(a) Notify the APCO within seven (7) days if the hour-per-year threshold is exceeded.

(i) If the hour-per-year threshold is exceeded, the exemption pursuant to subsection (D)(2) shall be permanently withdrawn.
(ii) If the hour-per-year threshold is exceeded the owner/operator shall, within 30 days of the notification, submit an application for a permit to operate to the District. Such application shall including a plan detailing actions and a schedule of progress to meet the applicable RACT limits and provisions of this rule within 18 months after the date of the notification; an ECP conforming to the requirements of Section (E) for the Emission Control Equipment.

(2) Notwithstanding the provisions of Sections (F)(2) and (G)(1) above, a Public Service Unit shall not be subject to the hour-per-year threshold when:

(a) Such Unit is operating during a state of emergency declared by a proclamation of the Governor of the State of California; and

(b) Such Unit is located within the specific geographic location identified in the state of emergency proclamation.

(H) Test Methods

(1) Compliance testing shall be subject to the protocols prescribed in the District's Compliance Procedural Manual.

(2) The following test methods shall be used to determine compliance with the provisions of this rule.

(a) NO_x emissions shall be determined by EPA Test Method 20.

(b) The Higher Heating Value (HHV) and the Lower Heating Value (LHV) shall be determined by the appropriate method for the fuel type listed below:

(i) For liquid fuels:
- a. ASTM Test Method D 240-87 (Standard Test Method for Heat of Combustion of Liquid Hydrocarbon Fuels by Bomb Calorimeter).

(ii) For distillate fuel:
- a. ASTM Test Method D 2382-88 (Standard Test Method for Heat of Combustion of Hydrocarbon Fuels by Bomb Calorimeter - High Precision Method); or**,**

(iii) For gaseous fuels:
- a. ASTM Test Method D 3588-91 (Standard Practice for Calculation Heat Value, Compressibility Factor, and Relative Density (Specific Gravity) of Gaseous Fuels); or
- b. ASTM Test Method D 1826-88 (Standard test Method for Caloric (Heating) Value of Gases in Natural Gas Range by Continuous Recording Calorimeter); or
- c. ASTM Test Method D 1945-81 (Standard Method for Analysis of Natural Gas by Gas Chromatography).

(I) Compliance Schedule

(1) The owner/operator of any Existing Stationary Gas Turbine subject to the provisions of Section (C)(1)(a) above shall comply with the following increments of progress:

(a) An ECP shall be submitted to the District within 90 days of rule adoption. The District shall approve the ECP within 30 days of submission.

(b) Any affected turbine shall be in full compliance with all applicable provisions of the rule within twelve months of rule adoption.

(c) Demonstrate final compliance with all applicable standards and requirements of the rule within six months of the installation of the NO_x reduction technology.

(2) The owner/operator of any new Stationary Gas Turbine subject to the provisions of Section (C) shall comply as of the date of adoption of this rule.

[SIP: Submitted as amended 01/19/10 on mm/dd/yy; Submitted as amended 4/11/97 on 8/1/97; Approved _____, _____, 40 CFR 52.220(c)(230)(i)(B)(1)]

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ANTELOPE VALLEY AIR POLLUTION CONTROL DISTRICT

RULE 1135.
EMISSIONS OF OXIDES OF NITROGEN
FROM ELECTRIC POWER GENERATING SYSTEMS

(Adopted August 4, 1989)(Amended December 21, 1990)(Amended July 19, 1991)

(a) Applicability

This rule applies to electric power generating systems.

(b) Definitions

1. ADVANCED COMBUSTION RESOURCE means a combustion resource, within or outside the District, irrespective of ownership, capable of generating electricity using cogeneration; combined cycle gas turbines; intercooled, chemically recuperated, or other advanced gas turbines; and other advanced combustion processes.

2. ALTERNATIVE RESOURCE means a resource, within or outside the District, irrespective of ownership, capable of generating electricity in a non-conventional manner, including, but not limited to: solar; geothermal; wind; fuel cells; electricity conservation; and electricity demand-side management measures.

3. APPROVED ALTERNATIVE OR ADVANCED COMBUSTION RESOURCE means an alternative resource or advanced combustion resource which is approved by the Executive Officer. The Executive Officer shall disapprove an alternative resource or an advanced combustion resource unless and until it:
   A. Displaces boiler capacity existing in the District on or after July 19, 1991; and
   B. Emits NOx at no more than 0.10 pound per net megawatt-hours (MWH) on a daily average basis if the resource is located within the District, or no more than 0.05 pound per net MWH on a daily average basis if the resource is located outside the District; for cogeneration facilities, the daily NOx emission per MWH shall be calculated after deducting 0.013 pound of NOx for each million BTU of useful thermal energy produced which is not used for electric power generation; and
   C. Commences operation on or after July 19, 1991; and
   D. Is proven to the satisfaction of the Executive Officer that the net megawatt-hours obtained or conserved are real, quantifiable, and enforceable.
4. ALTERNATIVE RESOURCE OR ADVANCED COMBUSTION RESOURCE BREAKDOWN means an unscheduled condition during which no net electric power is obtained from an approved alternative or advanced combustion resource for 24 continuous hours or more.

5. BOILER means any combustion equipment in the District fired with liquid and/or gaseous fuel, which is primarily used to produce steam that is expanded in a turbine generator used for electric power generation. This includes only units existing on July 19, 1991, which are owned or operated by any one of the following: Southern California Edison, Los Angeles Department of Water and Power, City of Burbank, City of Glendale, and City of Pasadena, or any of their successors.

6. COGENERATION FACILITY means equipment used to produce electricity and other forms of useful thermal energy through the sequential use of energy, as specified in Public Resources Code Section 25134.

7. DAILY means a calendar day starting at 12 midnight and continuing through to the following 12 midnight hour.

8. DISPLACE means either of the following:

A. The concurrent and enforceable reduction of equivalent boiler capacity from one or more designated boilers in the District, such that the combined electric power obtained from approved alternative or advanced combustion resources and designated boilers does not exceed the maximum permitted capacity of the designated boilers, on an hourly average basis; or
B. The reduction of boiler capacity, equivalent to the maximum electric power obtained from the approved alternative or advanced combustion resource, from one or more boilers in the District for not less than six months as specified in the Permit to Operate. The owner or operator of the boilers may apply to the Executive Officer for restoration of the displaced capacity in the Permit to Operate, which shall be approved upon:
    i. Disapproval of the previously approved alternative or advanced combustion resource which was based on such displaced capacity; and
    ii. Evidence of compliance with all provisions of this rule after the restoration of the displaced capacity.

During an alternative or advanced combustion resource breakdown, the associated displaced boiler capacity may be utilized up to a maximum of 120 hours in any calendar month, provided the Executive Officer is notified prior to such utilization.

9. DISTRICT-WIDE DAILY LIMITS means the daily emissions limits applicable to any electric power generating system, consisting of an emissions cap and/or an emissions rate.
    A. EMISSIONS CAP is expressed in pounds of NOx and calculated as the total daily NOx emissions in pounds from all boilers, replacement units, and approved alternative or advanced combustion resources in the District.
    B. EMISSIONS RATE is expressed in pounds of NOx per Megawatt-Hour and calculated as the total daily NOx emissions in pounds from all boilers, replacement units, and approved alternative or advanced combustion resources in the District, divided by the total daily net electric power generated and/or obtained in Megawatt-Hours from all boilers and replacement units in the District and approved alternative or advanced combustion resources within or outside the District. For the purposes of this calculation, 70 percent, or higher if proven to the satisfaction of the Executive Officer, of the net Megawatt-Hours obtained from an approved alternative or advanced combustion resource outside the District shall be used. NOx emissions during start-ups and shutdowns, up to a maximum of 12 hours for each event, shall not be included in the determination of the emissions rate for an electric power generating system if five or fewer boilers are in operation during this period.

NOx emissions from approved cogeneration facilities shall be calculated after deducting 0.013 pound of NOx for each million BTU of useful thermal energy produced which is not used for electric power generation.

10. ELECTRIC POWER GENERATING SYSTEM means all boilers, replacement units and approved alternative or advanced combustion resources owned or operated by, and approved alternative or advanced combustion resources and replacement units under contract to sell power to, any one of the following: Southern California Edison, Los Angeles Department of Water and Power, City of Burbank, City of Glendale, City of Pasadena, or any of their successors.

11. FORCE MAJEURE NATURAL GAS CURTAILMENT means an interruption in natural gas service due to unforeseeable failure, malfunction, or natural disaster, not resulting from an intentional or negligent act or omission on the part of the owner or operator of a boiler or a replacement unit, or a supply restriction resulting from a California Public Utilities Commission priority allocation system, such that the daily fuel needs of a boiler or a replacement unit cannot be met with the natural gas available.

12. NOx EMISSIONS means the sum of nitric oxides and nitrogen dioxides emitted, collectively expressed as nitrogen dioxide emissions.

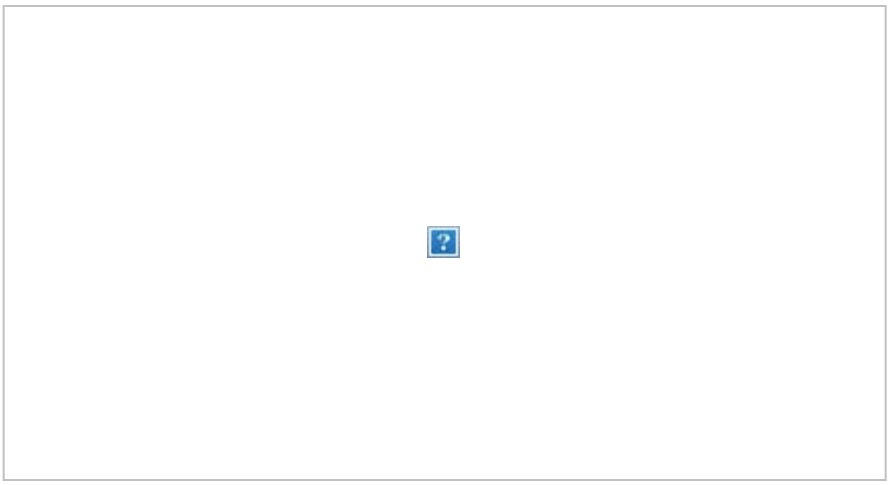
13. REPLACEMENT UNIT for the purpose of this rule means equipment within an electric power generating system, irrespective of ownership, which permanently replaces boiler capacity existing on July 19, 1991 in the same system in the District, and meets the requirements of Best Available Control Technology (BACT), as determined

by the Executive Officer. If the replacement unit's electric power output in net megawatts exceeds the permitted net megawatt capacity of the boiler(s) replaced, only the electric power generation and NOx emissions prorated to the permitted net megawatt capacity of the boiler(s) replaced shall be subject to the provisions of this rule.

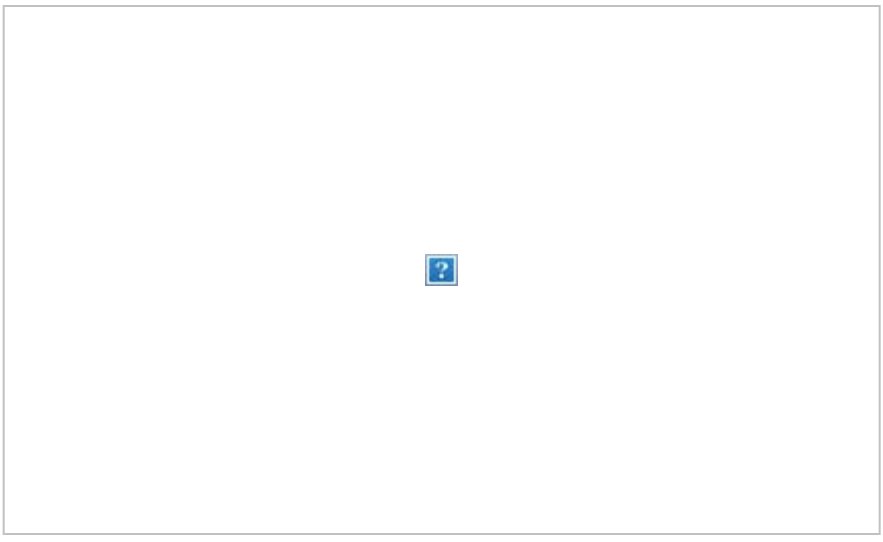
14. START-UP OR SHUTDOWN is any one of the following events:
    A. START-UP is the time period during which a boiler is heated to its normal operating temperature range from a cold or ambient temperature, or from a hot standby condition where no net electric power is produced for at least 8 hours.
    B. SHUTDOWN is the time period during which a boiler is allowed to cool from its normal operating temperature range to a cold or ambient temperature, or to a hot standby condition where no net electric power is produced for at least 8 hours.
15. USEFUL THERMAL ENERGY means thermal energy used in any industrial or commercial process, or used in any heating or cooling application. This shall not include the thermal energy of any condensate returned from the process or application to the cogeneration facility, or any thermal energy used to produce electric power.

(c) Emissions Limitations

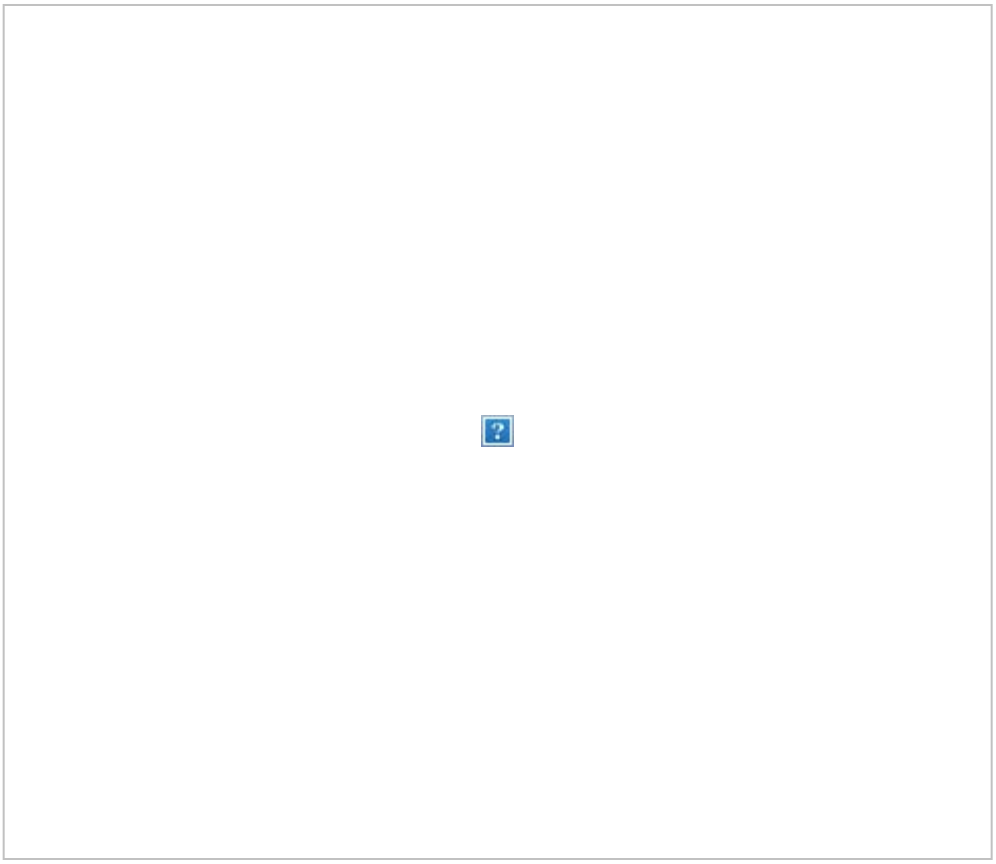
1. Southern California Edison, or its successor, shall not operate its electric power generating system unless the following District-wide daily limits on emissions rate and emissions cap are met during the applicable time period:



2. Los Angeles Department of Water and Power, or its successor, shall not operate its electric power generating system unless the following District-wide daily limits on emissions rate and emissions cap are met during the applicable time period:



3. The City of Burbank, the City of Glendale, and the City of Pasadena, or any of their successors, shall not operate their electric power generating system unless at least one of the following District-wide daily limits on emissions rate or emissions cap is met during the applicable time period:



4. Electric power generating systems shall not emit NOx from all boilers, replacement units and approved alternative resources or advanced combustion resources in the District, for any calendar year beginning with 2000, in excess of the following limits:
   A. 1,640 tons per year for Southern California Edison Co.;
   B. 960 tons per year for Los Angeles Department of Water and Power;
   C. 56 tons per year for the City of Burbank;
   D. 35 tons per year for the City of Glendale; if Grayson combined cycle gas turbine Unit 8BC cannot produce electricity because of a breakdown for 30 continuous days or more, the annual NOx emissions limit shall be increased by 65 pounds per day, up to a maximum of 41 tons per year.
   E. 80 tons per year for the City of Pasadena.
5. A violation of any requirement specified in paragraphs (c)(1), or (c)(2), or (c)(3), or (c)(4) shall constitute a violation of this rule for every permitted unit operating during the exceedance period in the applicable electric power generating system. This provision shall not be applicable to approved alternative or advanced combustion resources, and compliance shall be determined assuming that NOx emissions from approved alternative or advanced combustion resources occur at actual or permitted levels, whichever is lower.
6. All retrofit emission control devices required to meet the provisions of this rule for the year 2000 shall be installed and be operative on each boiler by December 31, 1997, except for the three cities of Glendale, Pasadena and Burbank for whom the deadline shall be December 31, 1999. All replacement units and approved alternative or advanced combustion resources required by the approved compliance plan for all the electric power generating systems shall be installed and be operative by December 31, 1999.
7. The owner or operator of each boiler and approved alternative or advanced combustion resource in the District shall submit an application for change of permit conditions to include NOx emission limits for each boiler and approved alternative or advanced combustion resource, as specified in the compliance plan requirements in subparagraph (d)(1)(C). Such applications shall be submitted no later than January 1, 1992, to the Executive Officer for approval.

8. A violation of any unit-specific NOx emissions limits established in a District Permit to Operate or approved compliance plan shall constitute a violation of this rule for that unit of the electric power generating system.

(d) Compliance Plans

1. Compliance Plan (Plan) approval and disapproval:
   A. Each owner or operator of a boiler shall submit a Plan by January 1, 1992 to the Executive Officer for approval. The Plan shall propose actions and alternatives which will be taken to meet or exceed the requirements of this rule.
   B. The Executive Officer shall seek input from the Air Resources Board (ARB), the California Energy Commission (CEC), and the California Public Utilities Commission (CPUC) prior to approval of the Plan. All written comments received from the ARB, the CEC, and the CPUC for a CPUC-regulated utility, within 30 days of the receipt of the Plan, shall be considered by the Executive Officer for Plan approval.
   C. The Executive Officer shall disapprove the Plan unless the applicant proves to the satisfaction of the Executive Officer that the implementation of the Plan will result in timely compliance with all provisions of this rule. The approved Plan shall specify a NOx emission limit for each unit of the electric power generating system in Lb NOx per net Megawatt Hour on an hourly average basis; such emission limit shall not be applicable when the unit is not producing any net electric power, or during a start-up, a shutdown, or 12 hours for each start-up or shutdown, whichever is less.
   D. On and after July 1, 1992, failure to have an approved Plan or failure to implement the provisions of an approved Plan shall constitute a violation of this rule.
2. The Plan shall contain, at a minimum:
   A. A list of all boilers subject to this rule with the maximum rated net and gross generating capacity for each unit.
   B. A schedule of equipment to be controlled, displaced, or replaced, indicating the type of control to be applied to each existing boiler and the emissions reductions for each compliance increment, and identifying each unit to be displaced with an alternative or advanced combustion resource.
   C. Detailed schedules for submittal of permit applications, construction activities, and planned operation phases.
   D. A detailed list of all assumptions and calculations used to determine compliance with the District-wide daily limits.
   E. A list of the control devices and methods which are being proposed for each boiler specified in subparagraph (d)(2)(A), along with the percent NOx reduction efficiency assumed for each.
   F. Historical power generating data for each boiler and future resource plans used to support power generation mix assumptions.
   G. For each year, beginning with 1992, a graph of the NOx emission in Lb NOx/hour versus net Megawatts generated on an hourly average basis for the full load range of each unit of the electric power generating system burning natural gas that will result in compliance with the District-wide daily limits as specified in subsection (c), Emissions Limitations, for the following cases:
      i. Under a projected peak generation day for each future year of compliance, based on District guidelines, and
      ii. Individually for each unit, under maximum power generation for that unit on a projected peak generation day for each future year of compliance.
   H. Identification of conditions that may require an exemption under subsection (h) and the actions taken or to be taken to minimize or eliminate such conditions.
3. The Plan shall also include proposed increments of progress for the following:
   A. Southern California Edison shall install and operate by December 31, 1993 a Selective Catalytic Reduction unit (SCR) on an existing 480 MW steam boiler such that NOx emissions from the facility do not exceed 0.25 pound of NOx per net MWH; and
   B. Los Angeles Department of Water and Power shall replace at least 240 megawatts of existing steam boiler capacity by December 31, 1993 such that NOx emissions from the replacement unit do not exceed applicable Best Available Control Technology standards, as determined by the Executive Officer.
4. Not earlier than July 1 of any year following 1992, amendments to a previously approved Plan may be proposed to the Executive Officer as necessary to reflect energy regulatory agency resource or municipal authority planning

determinations, adjustments to unit specific emissions limits required in subparagraph (d)(1)(C) in view of emissions control performance test data, and advancements in emissions control technology. The Executive Officer shall disapprove such amendments unless the applicant proves to the satisfaction of the Executive Officer that the implementation of the amended Plan will result in timely compliance with all provisions of this rule.

5. All approved Plans and approved amendments to Plans shall be submitted by the District to the Air Resources Board and the Environmental Protection Agency as source-specific revisions to the State Implementation Plan.

(e) Measurements

1. The owner or operator of each boiler, replacement unit and approved alternative or advanced combustion resource in the District shall install, operate, and maintain in calibration a~~n~~ continuous emission monitoring system (CEMS) and a Remote Terminal Unit (RTU) to demonstrate compliance with the provisions of this rule.
2. Each CEMS shall meet all applicable federal, state and District requirements for certification, calibration, performance, measurement, maintenance, notification, recordkeeping and reporting, including, but not limited to, the requirements set forth in the District's "CEMS Requirements Document for Utility Boilers," dated July 19, 1991. Prior to the installation of a CEMS, the owner or operator of each boiler, replacement unit and approved alternative or advanced combustion resource in the District shall submit a revised detailed CEM Plan by October 19, 1991 for the approval of the Executive Officer. The CEM Plan shall contain all information required in the District's "CEMS Requirements Document for Utility Boilers," dated July 19, 1991.
3. Each RTU shall meet specifications set forth by the Executive Officer to ensure that emissions and other data necessary to determine compliance are reliably and accurately telecommunicated from each unit to the District in a format compatible with District equipment. Each RTU shall be installed with the prior approval of the Executive Officer by January 1, 1993.
4. Starting December 21, 1990 until January 1, 1993, the owner or operator of each boiler, replacement unit and approved alternative or advanced combustion resource in the District shall submit a monthly compliance report to the Executive Officer, and shall make all data available to the District staff on a daily basis according to the interim reporting requirements specified in the "CEMS Requirements Document for Utility Boilers," dated July 19, 1991.
5. The owner or operator of each boiler, replacement unit and approved alternative or advanced combustion resource in the District shall install testing facilities as specified in the "CEMS Requirements Document for Utility Boilers," dated July 19, 1991, by January 1, 1993.
6. The owner or operator of each boiler, replacement unit and approved alternative or advanced combustion resource in the District shall install, maintain and operate a backup data gathering and storage system after each associated RTU is installed, but not later than January 1, 1993, as specified in the "CEMS Requirements Document for Utility Boilers," dated July 19, 1991.
7. CEMS data shall be gathered and recorded at least once per minute at each boiler, replacement unit and approved alternative or advanced combustion resource in the District, and valid data, as specified in the "CEMS Requirements Document for Utility Boilers," dated July 19, 1991, shall be obtained for at least 90 percent of the data points in any calendar day.
8. If valid data is not obtained by a CEMS for any boiler, replacement unit or approved alternative or advanced combustion resource in the District, the following alternative means of NOx emissions data generation may be used for not more than 72 hours in any one calendar month:
    A. Reference test methods as specified in the "CEMS Requirements Document for Utility Boilers," dated July 19, 1991; or
    B. Load curves provided approval is obtained as specified in the "CEMS Requirements Document for Utility Boilers," dated July 19, 1991. New load curves shall be submitted for the approval of the Executive Officer if the basic equipment is modified.

(f) Use of Liquid Petroleum Fuel

1. The District-wide daily limits on emissions rate and emissions cap specified in paragraphs (c)(1), (c)(2), and (c)(3) shall not apply to an electric power generating system on days of force majeure natural gas curtailment when the use of liquid petroleum fuel is required, provided that:
    A. Within 15 days of each occurrence, the owner or operator of each boiler submits an affidavit signed by a

corporate officer affirming that liquid petroleum fuel was burned due to force majeure natural gas curtailment; and

B. Each boiler, when it burns natural gas exclusively, meets the applicable unit-specific NOx emission limit specified in subparagraph (d)(1)(C); and

C. Each boiler, when it burns liquid petroleum fuel exclusively, emits oxides of nitrogen at no more than 2 times the applicable unit-specific NOx emission limit specified in subparagraph (d)(1)(C); and

D. Each boiler, when it burns a combination of liquid petroleum fuel and natural gas, emits oxides of nitrogen at no more than the prorated limit for that unit, obtained from the requirements specified in subparagraphs (f)(1)(B) and (f)(1)(C), and weighted by the flow rate and gross heating value of natural gas and liquid petroleum fuel, respectively. The calculation procedure in the "CEMS Requirement Document for Utility Boilers", dated July 19, 1991 shall be followed.

2. A boiler may burn liquid petroleum fuel for up to 24 hours in any calendar year for fuel readiness testing provided that the emission limitation specified in subparagraph (f)(1)(C) is met. The unit specific NOx emission limit specified in subparagraph (d)(1)(C) shall not apply during this period.

(g) Municipal Bubble Options

1. Any electric power generating system may form a municipal bubble by linking with one or more electric power generating system(s), for the purposes of this rule, provided all of the following conditions are met:
   A. The municipal bubble does not include Southern California Edison; and
   B. The municipal bubble is formed for at least one year, or more; and
   C. An application for approval of the municipal bubble is submitted jointly by all affected municipal utilities to the Executive Officer, at least six months in advance; and
   D. Written approval of the application for the municipal bubble is obtained from the Executive Officer prior to utilization of any provision contained in subsection (g), Municipal Bubble Options.
2. The application for a municipal bubble required in subparagraph (g)(1)(C) shall include, without being limited to:
   A. Proposed amendments to the compliance plans of all affected municipal utilities, as required to meet or exceed the municipal bubble emissions limitations specified in paragraph (g)(3); and
   B. Applications for change of permit conditions to adjust NOx emissions limits for each boiler, replacement unit and approved alternative or advanced combustion resource in the District, as required by the proposed amendments to the compliance plans; and
   C. Any other information required by the Executive Officer to evaluate compliance with the provisions of this rule. The Executive Officer shall not approve the application for a municipal bubble unless it is demonstrated to the satisfaction of the Executive Officer that such action(s) will result in compliance with the municipal bubble emissions limitations specified in paragraph (g)(3) in an enforceable manner.
3. Municipal bubble emissions limitations shall be derived from the District-wide daily limits on emissions rate and emissions cap specified in paragraphs (c)(2) and (c)(3), for each municipal utility, as follows:
   A. The District-wide daily limits on emissions rate in pounds of NOx per net megawatt-hours shall be the sum of the emissions rates of each participating utility, weighted by the maximum permitted capacity of each utility as a fraction of the total permitted capacity in the municipal bubble, for the applicable time period; and
   B. The District-wide daily limits on emissions cap in pounds of NOx per day shall be the sum of the emissions cap of all participating utilities, for the applicable time period, and beginning December 31, 1999, if Los Angeles Department of Water and Power is included in the municipal bubble; and
4. An electric power generating system subject to a municipal bubble approved by the Executive Officer shall be exempt from the utility-specific requirements of paragraphs (c)(2) and (c)(3); and be subject to the municipal bubble emissions limitations specified in paragraph (g)(3) for the applicable time period.
5. A violation of any municipal bubble emissions limitations required in paragraph (g)(4) shall constitute a violation for each permitted boiler and replacement unit, operating during the exceedance period, in the municipal bubble. This provision shall not apply to approved alternative or advanced combustion resources.

(h) Exemptions

1. Notwithstanding the provisions of paragraphs (c)(1) or (c)(2), Southern California Edison or Los Angeles

Department of Water and Power may operate its electric power generating system if both the following District-wide daily limits on emissions rate and emissions cap are met:

2. Notwithstanding the provisions of paragraphs (c)(1), (c)(2), or (c)(3), an electric power generating system may be operated for no more than 10 calendar days in any calendar year if all the following conditions are met:
   A. Both the following District-wide daily limits on emissions rate and emissions cap are met:

   B. The electric generating system owner/operator has taken all possible steps to comply with paragraphs (c)(1), (c)(2) and (c)(3), including the interruption of non-firm load.

   C. The exemption is not required as a result of operator error, neglect, or improper operating or maintenance procedures;

   D. Steps are immediately taken to correct the condition;

   E. The electric power generating system owner/operator reports to the District the need for the exemption within one hour of the occurrence or within one hour of the time said operator knew or reasonably should have known of the occurrence;

   F. No later than one week after each event the owner/operator submits a written report to the District including but not limited to:
      i. statement that the situation has been corrected, together with the date of correction and proof of compliance;

      ii. A specific statement of the reason(s) or cause(s) for the exemption sufficient to enable the Executive Officer to determine whether the occurrence was in accordance with the criteria set forth in subparagraphs (h)(2)(B) and (h)(2)(C) of this rule;

      iii. A description of the corrective measures undertaken and/or to be undertaken to avoid such an occurrence in the future.

[SIP: Submitted as amended 7/19/91 on 1/28/92 and approved for SCAQMD area only on 8/11/98, 63 FR 42728.]

FOR REFERENCE PURPOSES ONLY: (Amended July 19, 1991)

CONTINUOUS EMISSION MONITORING SYSTEMS (CEMS)

REQUIREMENTS DOCUMENT FOR UTILITY BOILERS

This document specifies requirements under Rule 1135 for continuous emission monitoring systems. Other District rules and permit conditions may require measurements, calculations, and reporting in addition to those indicated in this document.

1. REQUIREMENTS

1.1 The owner or operator of each boiler, unit, and approved alternative or advanced combustion resource shall install, calibrate, maintain, and operate an approved CEMS, and record the output of the system, for measuring the following:

a. Nitrogen oxides emissions (in units of ppmv) discharged to the atmosphere from each boiler, unit, and approved alternative or advanced combustion resource.
b. Oxygen concentration, at each location where nitrogen oxides are monitored.
c. Stack gas volumetric flow rate. An in-stack flow meter may be used to determine mass emission rates to the atmosphere from each boiler, unit, and approved alternative or advanced combustion resource, except:
    i. when more than one boiler or resource vents to the atmosphere through a single stack, or
    ii. during periods of low flow rates when the flow rate is no longer within the applicable range of the in-stack flow meter.
d. Heat input rate when needed by the CEMS to determine the stack gas volumetric flow rate, or to determine applicable prorated emission limits during periods when the boiler, unit, or approved alternative or advanced combustion resource is firing on both gaseous and liquid fuels. The owner or operator shall include in the CEMS calculations the F_d factors listed in 40 CFR Part 60, Appendix A, Method 19, Table 19-1. The owner or operator shall submit data to develop Fd factors when alternative fuels are fired and obtain the approval of the Executive Officer for use of the Fd factors before firing any alternative fuels.
e. Net MWH of electricity produced at each affected boiler, unit, or approved alternative or advanced combustion resource.

The owner or operator shall also provide any other data necessary for calculating air contaminant emission rates as determined by the Executive Officer.

2. MONITORING SYSTEMS

2.1 All CEMS at each affected boiler, unit, or approved alternative or advanced combustion resource shall, at a minimum, generate and record the following data points once per minute:

a. Nitrogen oxide concentration in the stack in units of ppmv.
b. Oxygen concentration in the stack in units of percent.
c. Volumetric flow rate of stack gases in units of dry standard cubic feet per minute (DSCFM). For Rule 1135 standard gas conditions are defined as temperature at 68oF and one atmosphere of pressure.
d. Fuel flow rates in units of standard cubic feet per minute (SCFM) for gaseous fuels or pounds per minute (lb/min) for liquid fuels if EPA Method 19 is used to calculate the stack gas volumetric flow rate.
e. Nitrogen oxide emission rate in units of lb/minute. The nitrogen oxide emission rate is calculated according to the following:

When the CEMS uses the heat input rate to determine the nitrogen oxides emission rates, the CEMS will use the following equation to calculate the emission rate of nitrogen oxides:

f. During any one minute period when the net MW output of the replacement unit exceeds the permitted net MW capacity of the replaced boiler, the data points e_i and f_i (defined in Paragraph 2.2) must be recalculated by multiplying by the following factor:

$$\mathbf{(MW_p/MW_r)}$$

where: MW_p = Net MW output capacity of the replaced boiler,
and MW_r = Net MW output during the one minute period
= f_i x 60

Record the uncorrected and corrected values of ei and fi. Calculate and record the data points E, F, G, and H, the hourly lb NOx/net MWH of electricity produced, and the daily lb NOx/net MWH of electricity produced using first the uncorrected and corrected ei and fi values and using then the corrected ei and fi values.

g. Net MWH of electricity produced. The net MWH are defined as:

$$\mathbf{net\ MWH = VIt \cos ø /106}$$

where V = Voltage to the power grid (Volt), I = Current to the power grid (Ampere), cos ø = Power factor, and ø = Phase angle. t = Time (hr) = 1/60 hr,

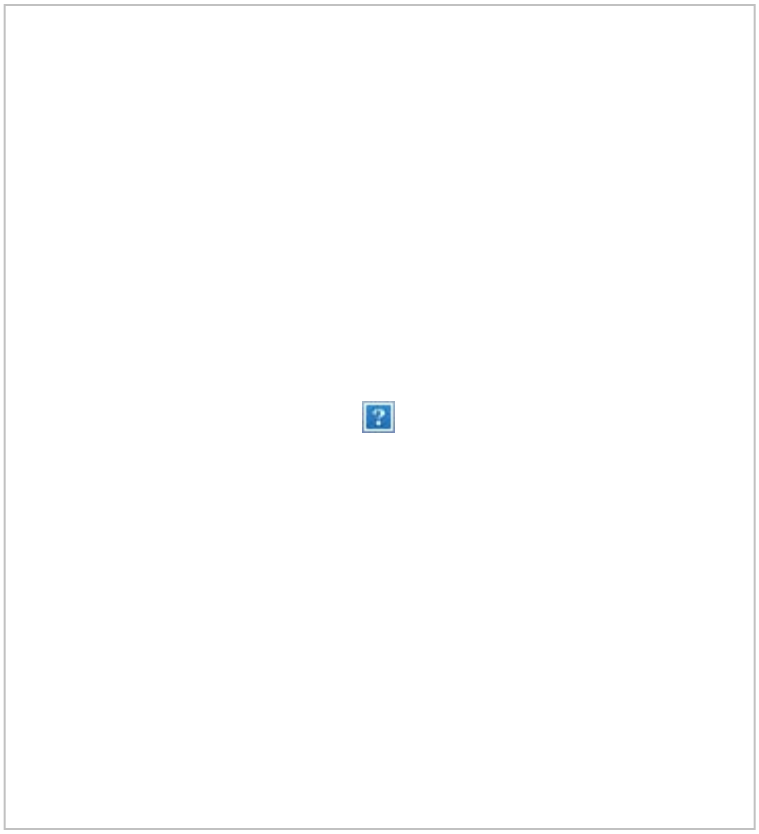
The above equation is only a definition of MWH and a meter which measures MWH directly may be used. The voltage, current, power factor, and time do not need to be measured separately.

net MWH = Gross MWH - Auxiliary MWH

h. CEMS status. The following codes shall be used to report the CEMS status:

0 - Collecting valid data,
1 - In calibration,
2 - Off line,
3 - Tamper/security,
4 - Alternative data acquisition (see Paragraphs 2.7 and 2.8),
5 - Hot Standby,
6 - Out-of-control,
7 - Startup/shutdown.

2.2 The hourly average stack gas concentrations of nitrogen oxides and oxygen, the stack gas volumetric flow rate, the fuel flow rate, emissions of nitrogen oxides, the net MWH of electricity produced, and the emissions rate of nitrogen oxides shall be calculated and recorded for each affected boiler, unit, or approved alternative or advanced combustion resource:



Calculate D for each type of fuel firing separately.

FORMULA

All concentrations and stack gas flow rates shall be made on a consistent wet or dry basis.

2.3 The average daily emissions of nitrogen oxides shall be calculated and recorded for each affected boiler, unit, or approved alternative or advanced combustion resource:

2.4 The average daily net MWH of electricity produced shall be calculated and recorded for each affected boiler, unit, or approved alternative or advanced combustion resource:

FORMULA

2.5 The hourly unit-specific emission limit shall be calculated and recorded when more than one fuel is burned during the hour:

2.6 The CEMS shall be operated and data recorded during all periods of operation of the affected boilers, units, and approved alternative or advanced combustion resources including periods of start-up, shutdown, malfunction or emergency conditions, except for CEMS breakdowns and repairs. Calibration data shall be recorded during zero and span calibration checks, and zero and span adjustments. For periods of hot standby the utilities may enter a default value for NOx emissions. Before using any default values the utilities must obtain the approval of the Executive Officer and must include in the CEMS applications or CEMS plans the estimates of NOx emissions, the NOx concentrations, the oxygen concentrations, and the fuel input rate or the stack gas volumetric flow rate during hot standby conditions. The Executive Officer will approve only those emission values which he finds to correspond to hot standby conditions.

2.7 When less than 90% of valid nitrogen oxides emission data are collected by the CEMS, emission rate data shall be obtained using District Methods 7.1 or 100.1 (for NOx concentration in the stack gas) in conjunction with District Methods 1.1, 2.1, 3.1, and 4.1 or by using District Methods 7.1 or 100.1 in conjunction with District Method 3.1 and EPA Method 19. If the NOx concentrations are less than 20 ppm, use Special District Method 7.1 (IC Alternative) or Modified District Method 100.1 for Low NOx Concentrations. Descriptions of the last two methods can be found in Paragraphs 3.3.1 and 3.3.2 of the Relative Accuracy Test Procedure. For District Method 7.1 or Special District Method 7.1 (IC Alternative), a minimum of 12 samples, equally spaced over a one-hour period, shall be taken. Each sample shall represent the five-minute period in which it was taken.

2.8 Load curves of NOx emission rates or other alternative means of NOx emission rate data generation may be

used to obtain nitrogen oxides emission data, provided the utility has obtained the approval of the Executive Officer prior to using alternate means of NOx emission rate data generation. The load curves and the alternate means of NOx emission rate data generation mentioned in this paragraph shall not be used more than 72 hours per calendar month and may only be used if no CEMS data or reference method data gathered under paragraph 2. 7 is available. Load curves may be used on units which have air pollution control devices for the control of nitrogen oxides emissions provided the utilities submit a complete list of operating conditions that characterize the permitted operation. The conditions must be specified in the compliance plans and permits which the rule requires. The process parameters specified in the conditions must be monitored by the CEMS.

2.9 At each affected boiler, unit, or approved alternative or advanced combustion resource the number of valid data points (N) during the day shall be greater than 90 percent of the number operating minutes during the day in order to obtain a valid daily emission rate for nitrogen oxides and the daily net MWH of electricity produced. Valid data points are data points from the CEMS which meet the requirements of Paragraphs 2.18, 2.19, 2.19.1, 2.19.2, 2.19.2, 2.19.4, 2.19.5, 2.19.6, 2.19.7, 2.19.8, and 2.20 or which are obtained by the methods indicated in Paragraphs 2.7 and 2.8. The utility is deemed to be out of compliance with rule 1135 on a systemwide basis if one or more boilers, units, or approved alternative or advanced combustion resources do not comply with the 90 percent valid data requirement.

2.10 Full scale span ranges for the NOx analyzers at each unit shall be set on a unit-by-unit basis. The full scale span range of the NOx analyzers shall be set so that all the data points gathered by the CEMS lie within 20-95 percent of the full-scale span range.

2.11 The CEMS design shall allow determination of calibration drift at zero and high-level (90 to 100 percent of full scale) values. Alternative low-level and high-level span values may be allowed with the prior written approval of the Executive Officer.

2.12 The volumetric flow measurement system shall meet a relative accuracy requirement of being less than or equal to 10 percent of the mean value of the reference method test data in units of DSCFM. Relative accuracy is calculated by the equations in Section 8 of 40 CFR Part 60, Appendix B, Performance Specification 2.

2.13 The emission rate measurement shall meet a relative accuracy requirement of being less than or equal to 20 percent of the mean value of the reference method test data in units of lb/hr. Relative accuracy is calculated by the equations in Section 8 of 40 CFR Part 60, Appendix B, Performance Specification 2.

2.14 The portion of the CEMS which samples, conditions, analyzes, and records the nitrogen oxides and oxygen concentrations in the stack gas shall be certified according to the specifications in District Rule 218.

2.15 Each boiler, unit, and approved alternative or advanced combustion resource shall have test facilities which meet the "Guidelines for Construction of Sampling and Testing Facilities" in the District Source Test Manual. If an alternate location (not conforming to the criteria of eight duct diameters downstream and two diameters upstream from a flow disturbance) is used, the absence of flow disturbance and stratification shall be demonstrated using District Source Test Methods.

2.16 The CEMS sample line from the CEMS probe to the sample conditioning system shall be heated to maintain the sample temperature above the dew point of the sample.

2.17 The District shall reevaluate the monitoring systems at any affected boiler, unit, or approved alternative or advanced combustion resource, where changes to the basic process equipment or air pollution control equipment occur, to determine the proper full span range of the monitors. Any monitor system requiring change to its full span range in order to meet the criteria in Paragraph 2.10 shall be recertified according to all the specifications in Rule 218 including the relative accuracy tests, the calibration drift tests, and the calibration error tests. A new CEMS plan shall be submitted for each CEMS which is reevaluated.

2.18 Procedure 1 of 40 CFR Part 60, Appendix F is incorporated by reference for the nitrogen oxides and oxygen monitors. The quality assurance plans required by 40 CFR Part 60, Appendix F shall be submitted to the District for the approval of the Executive Officer before the CEMS is certified. The reference method tests are those methods in Section 3 (RELATIVE ACCURACY TEST METHODS) of this guideline. Any CEMS which is deemed out-of-control by 40 CFR Part 60, Appendix F shall be corrected, retested by the

appropriate audit procedure, and restored to in-control within 24 hours after being deemed out-of-control. If the CEMS is not in-control at the end of the 24-hour period, the CEMS data shall be gathered using the methods in paragraphs 2.7 and 2.8 of these requirements. All data which is gathered in order to comply with 40 CFR Part 60, Appendix F shall be maintained for two years and be made available to the Executive Officer upon request. Any such data which is invalidated shall be identified and reasons provided for any data invalidation.

2.19 Each volumetric flow measurement system shall be audited at least once each calendar quarter. Successive audits shall occur no closer than two months. The audits shall be conducted as follows:

2.19.1 The Relative Accuracy Test Audit (RATA) shall be conducted at least once every four quarters. Conduct the RATA as described in Section 3 (RELATIVE ACCURACY TEST METHODS).

2.19.2 The Relative Accuracy Audit may be conducted three of four calendar quarters, but no more than three quarters in succession. To conduct an RAA, follow the procedure described in Section 3 (RELATIVE ACCURACY TEST METHODS) for the relative accuracy test, except that only three sets of measurement data are required.

2.19.3 Follow the equations described in Section 8 of 40 CFR Part 60, Appendix B, Performance Specification 2 to calculate the relative accuracy for the RATA. The RATA shall be calculated in units of dry standard cubic feet per minute (DSCFM).

2.19.4 Follow this equation to calculate the accuracy for the RAA:

2.19.5 If the relative accuracy using the RATA exceeds 20 percent of the mean reference method value, the CEMS shall be considered out-of-control. If the relative accuracy exceeds ±15 percent using the RAA, the CEMS shall be considered out-of-control. If the CEMS is out-of-control, take necessary corrective action to eliminate the problem. Following corrective action, audit the CEMS accuracy with an RAA or an RATA to determine if the CEMS is operating properly. An RATA shall be used following an out-of-control period resulting from an RATA. If the audit shows the CEMS to be out-of-control, the CEMS operator shall report the results of the audit showing the CEMS to be out-of-control, any subsequent audit showing the CEMS to remain out-of-control following corrective action, and the audit showing the CEMS to be operating within specifications following corrective action.

2.19.6 The beginning of the out-of-control period shall be the time corresponding to the completion of the sampling of the RAA or RATA. The end of the out-of-control period shall be the time corresponding to the completion of the sampling of the subsequent successful RAA or RATA.

2.19.7 During the period the CEMS is out-of-control, the CEMS data shall not be used in calculating emission compliance nor be counted towards meeting minimum data availability.

2.19.8 Whenever out-of-control periods occur for two consecutive quarters, the owner or operator shall revise the quality control procedures contained in the quality assurance plans, or modify and replace the CEMS. If the CEMS is modified or replaced, the new CEMS shall be recertified by the Executive Officer.

2.20 The nitrogen oxides emission rate (lb NOx/hr) portion of the CEMS at each boiler, unit or approved alternative or advanced combustion resource shall have a relative accuracy of no greater than 20 percent of the mean value of the reference method test data in terms of lb NOx/hr. This relative accuracy test shall be conducted during the certification test of each CEMS, and shall be conducted at least once every four quarters as an RATA for each CEMS. An RAA may be conducted three of four calendar quarters as described in Paragraph 2.19.1. The definition of an out-of-control CEMS is the same as Paragraph 2.19.5, except that the RAA shall exceed ±20 percent before the CEMS is considered out-of control. The definition

of out-of-control period is the same as Paragraph 2.19.6.The CEMS status during an out-of-control period is the same as Paragraph 2.19.7. The criteria for acceptable procedures is the same as Paragraph 2.19.8.

3. RELATIVE ACCURACY TEST METHODS

3.1 Conduct the reference method (RM) tests in such a way that they will yield results representative of the emissions from the source and can be correlated to the CEMS data.

3.2 Conduct a minimum of nine sets of all necessary reference method (RM) tests. Conduct each set within a period of 30 to 60 minutes.

3.3 Unless the expected concentrations of NOx are less than 20 ppm, District Methods 7.1 or 100.1 are the reference methods for NOx concentrations.

3.4 Use the Special District Method 7.1 (IC Alternative) or the Modified District Method 100.1 to determine NOx stack gas concentrations of less than 20 ppm.

3.4.1 *Modified District Method 100.1 for Low NOx Concentrations*

District Method 100.1 may be used to measure low NOx concentrations if the following additional quality control measures are taken on the reference method monitor:

a. Perform NO_2 system bias checks in addition to the regular system bias check in District Method 100.1. Use approximately 10 ppm NO_2 span gas for this system bias check. Perform these checks at the beginning, the middle, and the end of each test day. The checks made in the middle and the end of the test day must be made before emptying the condensate from the sampling system (if applicable).
b. Determine the NOx to NO concentration readings during at least one test run.
c. Determine the NO_2 to NO conversion efficiency by running a known NO_2 calibration gas (about 10 ppm) through the NO_2 convertor and comparing the calibrated monitor response to the NO_2 concentration.
d. The calibration error limits and the calibration gas specifications are the same as those in District Method 100.1. However, the tester may use calibration gas certified to an analytical accuracy of ±2 percent if calibration gases with analytical accuracies of ±1 percent are not available.
e. Conduct an NH_3 interference test if NH_3 is present. Use NH_3 calibration gas at 80-100 percent of the allowed NH_3 concentration.
f. Conduct Special District Method 7.1 (IC Alternative) tests simultaneously with the Modified District 100.1 tests during at least two runs. Collect at least six NOx bulbs during each run. Take at least two field blanks each testing day.

3.5 District Method 2.1 shall be used to determine the stack gas volumetric flow rate.

3.6 For District Method 2.1, District Method 1.1 shall be used to select the sampling site and the number of traverse points.

3.7 District Method 3.1 shall be used for diluent gas (O_2 or CO_3) concentration and stack gas density determination.

3.8 District Method 4.1 shall be used for moisture determination of the stack gas.

3.9 The NOx emissions shall be determined by using the results of paragraph 3.3 or 3.4 along with the results of paragraphs 3.5, 3.6, 3.7, and 3.8.

3.10 Suitable methods may be used to measure the net MWH produced at each boiler, unit, or approved alternative or advanced combustion resource provided the following conditions are met:

a. The owner or operator of each affected boiler, unit, or approved alternative or advanced combustion resource shall submit details of suitable methods to measure the net MWH of electricity produced of each boiler, unit, or approved alternative or advanced combustion resource. At a minimum, these details shall include a description of the principle of measurement and calculations used to calculate the net MWH of electricity produced, and the technique and procedures used to calibrate each net

MWH measurement device. Each net MWH meter shall be calibrated against standards which are traceable to National Institute of Standards and Technology (NIST) standards or to a higher authority if no NIST standards exist. The calibration accuracy tolerance of each net MWH measurement device shall be ±0.5 percent of all measured values. The methods submitted to the District shall be subject to the approval of the Executive Officer before they are used to determine the net MWH of electricity produced.

b. Each net MWH measurement device shall be calibrated a minimum of once every six months.

4. REPORTING PROCEDURES

4.1 Interim Reporting Procedures

4.1.1 From July 19, 1991 until December 31, 1992, the owner or operator will be allowed to use an interim procedure for data reporting and storage. The owner or operator shall submit as part of the required CEMS plan, a plan for interim data reporting and storage. The plan shall be subject to the approval of the Executive Officer and shall, at a minimum, meet the requirements of Paragraphs 4.1.2, 4.1.3, and 4.1.4.

4.1.2 All the data required in Paragraphs 4.1.3 and 4.1.4 shall be available at an identified location to the Executive Officer, upon request. This location shall be subject to the approval of the Executive Officer.

4.1.3 For each affected boiler, unit, or approved alternative or advanced combustion resource the following information shall be provided to the Executive Officer:

a. Calendar dates covered in the reporting period.

b. Each daily emission rate (lb NOx/day) and each hourly emission rate (lb NOx/hour).

c. Identification of the boiler, unit, or approved alternative or advanced combustion resource operating days for which a sufficient number of valid data points has not been taken; reasons for not taking sufficient data; and a description of corrective action taken.

d. Identification of F_d factor for each type of fuel used for calculations and the type of fuel burned.

e. Identification of times when daily averages have been obtained by manual sampling methods.

f. Identification of times when daily averages have been obtained by alternate means of NOx emission rate data generation.

g. Description of any modifications to the CEMS that could affect the ability of the CEMS to comply with the performance specifications in Rule 218.

h. Results of daily CEMS drift tests and quarterly accuracy assessments, as required under 40 CFR Part 60, Appendix F, Procedure 1.

i. Identification of the times when the pollutant concentration exceeded full span of the CEMS.

j. The daily net MWH of electricity produced.

k. The hourly unit-specific emission limit (lb NOx/net MWH of electricity produced.

l. The hourly lb NOx/net MWH of electricity produced.

4.1.4 The following information for the entire utility system shall be provided to the Executive officer on a monthly basis:

a. Calendar dates covered in the reporting period.

b. The sum of the daily emission rates (lb NOx/day) from all affected boilers, units, and approved alternative or advanced combustion resources.

c. The sum of the net MWH of electricity produced from all affected boilers, units, and approved alternative or advanced combustion resources.

d. The systemwide daily NOx emission rate (lb NOx per net MWH of electricity produced) expressed as a ratio of the sum of the daily emission rates from all boilers, units, and approved alternative or advanced combustion resources divided by the sum of the net MWH produced from all affected boilers, units, and approved alternative or advanced combustion resources.

4.1.5 All data required by Paragraphs 2.1, 2.2, 2.3, 2.4, 2.5, 4.1.3, and 4.1.4 shall be recorded and transmitted to the District in a format specified by the Executive Officer. 4.2 Final Reporting Procedures 4.2.1 On and after January 1, 1993, the RTU installed at each location shall constitute the reporting requirements. 4.2.2 On and after January 1, 1993, all or part of the interim data storage systems shall remain as continuous backup systems. 4.2.3 An alternate backup data storage system may be implemented, upon request. The owner or operator shall submit an Alternate Backup Data Storage Plan for the approval of the Executive Officer.

5. INTERIM MEASUREMENT PROCEDURES

5.1 Until December 31, 1992, the requirements of Paragraphs 2.19, 2.19.1, 2.19.2, 2.19.3, 2.19.4, 2.19.5, 2.19.6, 2.19.7, 2.19.8,(volumetric flow rate audit methods) 3.5, 3.6, 3.7, 3.8, and 3.9 (relative accuracy test methods) will be waived until such time as the required source testing facilities meeting the requirements of Paragraph 2.14 have been installed. The owner or operator shall submit as a part of the required CEMS plan, construction plans and a schedule for the installation of each new testing facility. The plan shall be submitted for the approval of the Executive Officer prior to installation. Prior to the completion of the testing facility for each emission source, the owner or operator shall submit a test plan for flow rate relative accuracy testing. Within 30 days after completion of the testing facilities (or 30 days of initial start-up thereafter), the required relative accuracy tests shall be completed. Sixty days thereafter, the owner or operator shall meet the requirements of Paragraphs 2.19, 2.19.1, 2.19.2, 2.19.3, 2.19.4, 2.19.5, 2.19.6, 2.19.7, and 2.19.8 using the reference methods in Paragraphs 3.5, 3.6, 3.7, 3.8, and 3.9 for relative accuracy test methods.

5.2 From July 19, 1991 to December 31, 1992, the data recorded by the system approved for Paragraph 4.1 shall be the data of record to determine if the CEMS meets the required performance specifications.

5.3 After December 31, 1992, the backup data system shall be the data of record to determine if the CEMS meets the required performance specifications. The backup system and the RTU system shall produce identical data.

5.4 Each orifice used to measure the fuel gas flow rate shall be removed from the gas supply line for an inspection once every 15 months. The following items shall be subject to inspection:

a. Each orifice shall be visually inspected for any nicks, dents, corrosion, erosion, or any other signs of damage according to the orifice manufacturer's specifications.

b. The diameter of each orifice shall be measured using the method recommended by the orifice manufacturer.

c. The flatness of the orifice shall be checked according to the orifice manufacturer's instructions. The departure from flatness of an orifice plate shall not exceed 0.010 inch per inch of dam height (D-d/2) along any diameter. Here D is the inside pipe diameter and d is the orifice diameter at its narrowest constriction.

d. The pressure gauge or other device measuring pressure drop across the orifice shall be calibrated against a manometer, and shall be replaced if it deviates more than ±2 percent across the range.

e. The surface roughness shall be measured using the method recommended by the orifice manufacturer. The surface roughness of an orifice plate shall not exceed 50 microinches.

f. The upstream edge of the measuring orifice shall be square and sharp so that it will not show a beam of light when checked with an orifice gauge.

g. In centering orifice plates, the orifice shall be concentric with the inside of the meter tube or fitting. The concentricity shall be maintained within 3 percent of the inside diameter of the tube or fitting along all diameters.

h. Any other calibration tests specified by the orifice manufacturer shall be conducted at this time.

5.5 If an orifice fails to meet any of the manufacturer's specifications, it shall be replaced within two weeks

6. ALTERNATIVE PROCEDURES

6.1 Emission Stack Flow Rate Determination

In the event that more than one boiler vents to a common stack, the alternative reference method for determining individual boiler flow rates shall be EPA Method 19. This method may be used for applicable boilers before and after the interim period mentioned in Section 4.1. The orifice plates used in every boiler vented to a common stack shall meet the requirements in Paragraph 5.4.

7. COGENERATION SYSTEMS

7.1 Cogeneration units must also measure and record the useful thermal energy along with the other measurements required in previous sections of this document. The measurements must meet the following conditions:

a. The owner or operator of each affected cogeneration unit must submit details of suitable methods to measure the useful thermal energy. At a minimum, these details shall include a description of all the measurement devices, including but not limited to flow meters, pressure measurement devices, and temperature measurement devices, the calculations used to calculate the useful thermal energy, and the technique and procedures used to calibrate each measurement device. Each measurement device shall be calibrated against standards which are traceable to NIST standards or to a higher authority if no NIST standards exist. The calibration accuracy tolerance of each measurement device shall be ± 1 per cent of all measured values. All measurement devices shall measure and record one data point each minute. The methods submitted to the District shall be subject to the approval of the Executive Officer before they are used for NOx emission deductions mentioned in (b)(2)(B).

b. Each measurement device shall be calibrated a minimum of once every six months.

ANTELOPE VALLEY AIR POLLUTION CONTROL DISTRICT

RULE 1140. ABRASIVE BLASTING

(Adopted February 1, 1980) (Amended August 2, 1985)

(a) Definitions

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

1. Abrasive is any material used in an abrasive blasting operation including but not limited to sand, slag, steel shot, garnet or walnut shells.

2. Abrasive Blasting is the cleaning or preparing of a surface by forcibly propelling a stream of abrasive material against the surface.

3. Abrasive Blasting Equipment is any equipment used in abrasive blasting operations.

4. Brushoff Blasting is a method of cleanup performed in order to achieve surface uniformity or impurity removal after wet blasting, hydroblasting, or vacuum blasting operations.

5. Confined Blasting is any abrasive blasting conducted in an enclosure which significantly restricts air contaminants from being emitted to the ambient atmosphere, including but not limited to shrouding, tanks, drydock, buildings, structures.

6. Facility is any property site at which one or more abrasive blasting operations, either confined or unconfined, are carried out or maintained as part of an identifiable business.

7. Hydroblasting is any abrasive blasting using high pressure liquid as the propelling force.

8. Multiple Nozzle describes more than one nozzle being used to abrasive blast the same surface in such close proximity that their separate plumes are indistinguishable.

9. Permanent Abrasive Blasting Operation or Equipment is any abrasive blasting operation conducted, or abrasive blasting equipment located, in a building which is used, in whole or in part, for abrasive blasting operations.

10. Sandblasting is abrasive blasting.

11. Source is the impact surface from any single abrasive blasting nozzle.

12. Steel or Iron Shot/Grit are abrasives which meet either the Society of Automotive Engineers recommended practices J827 and J444 or Steel Founders' Society of American Standards 21-68 or 20T-66, as those practices and standards existed on February 24, 1984.

13. Unconfined Blasting is any abrasive blasting which does not conform with definitions (5) or (9) of this section.

14. Vacuum Blasting is any abrasive blasting in which the spent abrasive and surface material is immediately collected by a vacuum device.

15. Wet Abrasive Blasting is any abrasive blasting using compressed air as the propelling force, which in the judgment of the Executive Officer uses an amount of water adequate to minimize the plume.

(b) Operating Requirements

1. No person shall, if he complies with an applicable performance standard in section (b)(4), discharge into the

atmosphere from any abrasive blasting any air contaminant for a period or periods aggregating more than three minutes in any one hour which is:
   A. As dark or darker in shade as that designated as No. 2 on the Ringelmann Chart, as published by the United States Bureau of Mines, or
   B. Of such opacity as to obscure an observer's view to a degree equal to or greater than does smoke described in section (b)(1)(A).
2. No person shall, if he is not complying with an applicable performance standard in section (b)(4), discharge into the atmosphere from any abrasive blasting any air contaminant for a period or periods aggregating more than three minutes in any one hour which is:
   A. As dark or darker in shade as that designated as No. 1 on the Ringelmann Chart, as published by the United States Bureau of Mines, or
   B. Of such opacity as to obscure an observer's view to a degree equal to or greater than does smoke described in section (b)(2)(A).
3. Compliance with all provisions of this rule does not exempt any person from complying with the requirements of Rule 402, Nuisance.
4. Any abrasive blasting operation except as provided for in section (c)(2) shall comply with at least one of the following performance standards:
   A. Confined blasting shall be used;
   B. Wet abrasive blasting shall be used;
   C. Hydroblasting shall be used; or
   D. Dry unconfined blasting shall use abrasives as defined in section (c).
5. Surface preparation for raised traffic delineating markers and pavement marking removal using abrasive blasting shall comply with at least one of the following performance standards:
   A. Wet abrasive blasting, hydroblasting, or vacuum blasting shall be used;
   B. Dry unconfined abrasive blasting for removal or surface preparation for immediate application of pavement markings of less than 1,000 square feet or for surface preparation for raised traffic delineating markers shall use abrasives as defined in section (c)(1).
6. Confined abrasive blasting shall be used for all abrasive blasting operations at a facility except under the following conditions:
   A. When steel or iron shot/grit is used.
   B. When the item to be abrasive blasted exceeds 8 feet in height, 8 feet in width, or 10 feet in length; or
   C. When the structure or surface is abrasive blasted at its permanent or ordinary location.
7. Abrasive blasting of stucco and concrete shall be performed by wet abrasive blasting, hydroblasting, or vacuum blasting, except dry abrasive blasting may be used for:
   A. Window and door returns and frames.
   B. Eaves, overhangs, and ceilings.
   C. Brushoff blasting except for stucco surfaces.
   D. Completely shrouded structures and blast areas that control emissions.
   E. Abrasive cleaning operations other than aggregate exposure or paint removal related to new concrete construction or repair activity if such operations are performed onsite.

(c) Requirements for Abrasives

1. Except as provided in section (c)(3) all abrasives used for dry unconfined blasting shall comply with the following performance standards:
   A. Before blasting the abrasive shall not contain more than 1 percent by weight material passing a No. 70 U.S. Standard sieve.
   B. After blasting, the abrasive shall not contain more than 1.8 percent by weight material five microns or smaller.
2. No person shall conduct dry unconfined blasting unless the abrasive(s) used in such operation have been certified by the Air Resources Board, on at least an annual basis, to comply with the performance standards set forth in section (c)(1).
3. Certified abrasives reused for dry unconfined blasting are exempt from section (c)(1)(B), but must conform to section (c)(1)(A).

4. All manufacturers and suppliers of abrasives certified for dry unconfined abrasive blasting shall legibly and permanently label the invoice, bill of lading and abrasive packaging or container with the following information:
    A. The manufacturer's name or identifiable trade name.
    B. The grade or brand name of the abrasive.
    C. The statement "ARB certified for dry unconfined blasting".
5. A blend of certified abrasives shall be considered certified.

(d) Test Method

All abrasives used for dry unconfined blasting shall comply with the performance requirements of sections (c)(1)(A) and (c)(1)(B) when tested in accordance with "Method of Test for Abrasive Media Evaluation, Test Method No. Calif. 371-A", or other test method approved by the Executive Officer.

(e) Visible Emission Evaluation

Visible emission evaluation of abrasive blasting operations shall be conducted in accordance with the following provisions:

1. Emissions shall be read in opacities and recorded in percentages.
2. The light source should be behind the observer during daylight hours.
3. The light source should be behind the emission during hours of darkness.
4. The observer position should be at approximately right angles to wind direction and at a distance no less than twice the height of the source but not more than a quarter mile from the base of the source.
5. Emissions from unconfined abrasive blasting shall be read at the densest point in the plume, which point shall be at least 25 feet from the source.
6. Where the presence of uncombined water is the only reason for failure to comply with opacity limits, the opacity limits shall not apply. The burden of proof in establishing that opacity limits shall not apply shall be upon the operator.
7. Emissions from unconfined abrasive blasting employing multiple nozzles shall be evaluated as a single source unless it can be demonstrated by the operator that each nozzle, evaluated separately, meets the requirements of this rule.
8. Emissions from confined abrasive blasting shall be read at the densest point after the air contaminant leaves the enclosure.

(f) Effective Dates

The owner or operator of any abrasive blasting operation subject to this rule shall comply with the provisions of this rule on the date of adoption.

3.14.84

Rule 1141.1 - Coatings and Ink Manufacturing

(a) Definitions

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

(1) A Coatings Manufacturer is an establishment that mixes, blends, and/or compounds paints, varnishes, lacquers, enamels, shellacs, or sealers, and is classified as 2851 in the Standard Industrial Classification Manual.

(2) An Ink Manufacturer is an establishment that mixes, blends, and/or compounds printing inks and is classified as 2893 in the Standard Industrial Classification Manual.

(3) ~~Reactive Organic Gases (ROG) means any gaseous chemical~~ compound which contains the element carbon; excluding carbon monoxide, carbon dioxide, carbonic acid, carbonates and metallic carbides; and excluding methane, 1,1,1-trichloroethane, methylene chloride, trifluoromethane and chlorinated-fluorinated hydrocarbons.

(4) Waterbased Coating is a paint, varnish, lacquer, enamel, shellac, sealer or ink that contains 10 percent or more, by weight, of water, as determined by the analytical procedures in Rule 107.

(5) Paste Ink is an ink that contains, primarily, McGee oil and glycol as solvent.

(6) High Speed Dispersion Mill is a mixer with one or more blades that rotate at high speed in order to disperse coating solids.

(7) Grinding Mills are mills with cylindrical chambers containing grinding media such as balls, pebbles, or sand that grind and disperse coating solids.

(8) Roller Mills are mills with horizontal rollers that grind and disperse coating solids.

(b) Requirements

(1) On or after September 1, 1984, a person shall not manufacture coatings and/or inks unless:

(A) Portable mixing vats are kept covered, except to add ingredients or to take samples, with lids:

(i) that extend at least 1/2 inch beyond the outer rim of the vat or are attached to the rim of the vat; and

(ii) are maintained in good condition such that, when in place, they maintain contact with the rim for at least 90 percent of the circumference of the rim of the vat; and

(iii) may have a slit to allow clearance for insertion of a mixer shaft. The slit shall be covered after insertion of the mixer, except to allow safe clearance for the mixer shaft.

(B) Stationary mixing vats are covered; except to add ingredients or take samples.

(2) On or after September 1, 1984 a person shall not manufacture coatings and/or inks unless:

(A) Portable mixing vat cleaning is done in a way which minimizes the emissions of ROG into the atmosphere and the cleaning method is approved by the Executive Officer.

(B) Stationary vat cleaning is done in a way which minimizes the emissions of ROG into the atmosphere and the cleaning method is approved by the Executive Officer.

(C) High-speed dispersion mills, grinding mills and roller mills are cleaned in a way which minimizes the emissions of ROG into the atmosphere and is approved by the Executive Officer.

(3) Grinding mills installed after January 1, 1985 shall have fully enclosed screens.

(c) Exemptions

(1) The provisions of this rule, except subparagraph (d)(2), shall not apply to a coatings and/or ink manufacturer which produces less than 500 gallons of coatings and/or ink in any one day.

(2) The provisions of subsection (b)(1) of this rule shall not apply to equipment while it is being used in the production of waterbased coatings and/or paste inks.

(3) The provisions of subsections (b)(1) and (b)(2) of this rule shall not apply to equipment used to produce coatings in vats with a volume of 12 gallons or less.

(d) Compliance

(1) On or before July 1, 1984 a coating and/or ink manufacture shall:

(A) submit, for District approval, a description of the methods and equipment used to achieve compliance with subsections (b)(2)(A), (b)(2)(B), and (b)(2)(C), and

(B) submit applications for new permits to construct or operate, as necessary, for new or modified equipment involved in such methods.

(2) On or before July 1, 1984 a coating and/or ink manufacturer shall:

(A) submit, for District approval, a description of the methods/limitations which will ensure qualification for exemption under subsection (c)(1) of this rule, and

(B) submit applications for new permits to construct or operate, as necessary, for new and modified equipment, involved in such methods, and

(C) maintain records, for one year, including daily production records, substantiating compliance.

(3) On or after September 1, 1984 a coating and/or ink manufacturer shall operate under the approved conditions specified in the compliance plan and/or in permit applications, for compliance with subsection(s) (d)(1) and/or (d)(2).

(e) Fees

For the purpose of determining the appropriate processing fees only, the filing of a Compliance Plan(s) as provided in subparagraph (d)(1) and/or (d)(2), shall be considered the equivalent of filing an application for a permit. The person submitting the Plan shall be assessed a filing fee and an engineering evaluation fee as described in Rules 301 ~~and 301.1.~~

1-11-93

(Adopted July 8, 1983)(Amended December 5, 1986)(Amended February 6, 1987)
(Amended April 3, 1987)(Amended August 7, 1987)(Amended December 2, 1988)
(Amended February 3, 1989)(Amended April 7, 1989)(Amended March 2, 1990)
(Amended November 2, 1990)(Amended December 7, 1990)(Amended August 2, 1991)
(Amended January 10, 1992)

RULE 1145. PLASTIC, RUBBER, AND GLASS COATINGS

(a) Definitions

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

(1) CARPET BACKING is the material applied to the un-napped surface of a carpet.

(2) CLEAR COATING is a colorless coating which contains binders, but no pigment, and is formulated to form a transparent film.

(3) COATING means a layer of material applied on a substrate that forms a film.

(4) COATING APPLICATION EQUIPMENT is any equipment used to apply coating to a substrate. Coating application equipment includes coating distribution lines, coating hoses, pressure-pots, spray guns, and hand-application equipment.

(5) DIP COATER is a type of application equipment that coats an object by submerging the object in a vat of coating, and subsequently withdrawing the object and draining off the excess coating.

(6) ELECTRIC DISSIPATING COATING is a coating that rapidly dissipates a high-voltage electric charge.

(7) ELECTROSTATIC APPLICATION is a method of applying coating whereby atomized paint droplets are charged and subsequently deposited on the substrate by electrostatic attraction.

(8) EMI/RFI SHIELDING is a coating used on electrical or electronic equipment to provide shielding against electromagnetic interference, radio frequency interference, or static discharge.

(9) EXEMPT COMPOUNDS are any of the following compounds:

(A) Group I
trifluoromethane (HFC-23)
chlorodiflurormethane (HCFC-22)
dichlorotrifluoroethane (HCFC-123)
tetrafluoroethane (HFC-134a)

dichlorofluoroethane (HCFC-141b)
chlorodifluoroethane (HCFC-142b)
1,1,1-trifluoroethane (HFC-143a)
1,1-difluoroethane (HFC-152a)
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
sulfur-containing perfluorocarbons with no unsaturations and with sulfur bonds only to carbon and fluorine

(B) Group II
methylene chloride
1,1,1-trichloroethane (methyl chloroform)
carbon tetrachloride
trichlorotrifluoroethane (CFC-113)
dichlorodifluoromethane (CFC-12)
trichlorofluoromethane (CFC-11)
dichlorotetrafluoroethane (CFC-114)
chloropentafluoroethane (CFC-115)

Use of Group II compounds may be restricted in the future because they are toxic or potentially toxic, upper-atmosphere ozone depleters, or cause other environmental impacts. The District Board has adopted a policy which states that chlorofluorocarbons (CFC) will be phased out at the earliest practicable date on or before 1997.

(10) FLOW COATER is a type of coating application equipment that coats an object by flowing a stream of coating over the object and draining off any excess coating.

(11) GRAMS OF VOC PER LITER OF COATING, LESS WATER AND LESS EXEMPT COMPOUNDS, is the weight of VOC per combined volume of VOC and coating solids and can be calculated by the following equation:

$$\text{Grams of VOC per Liter of Coating, Less Water and Less Exempt Compounds} = \frac{W_s - W_w - W_{es}}{V_m - V_w - V_{es}}$$

Where:
W_s = weight of volatile compounds in grams
W_w = weight of water in grams
W_{es} = weight of exempt compounds in grams
V_m = volume of material in liters
V_w = volume of water in liters
V_{es} = volume of exempt compounds in liters

(12) GRAMS OF VOC PER LITER OF MATERIAL is the weight of VOC per volume of material and can be calculated by the following equation:

$$\text{Grams of VOC per Liter of Material} = \frac{W_s - W_w - W_{es}}{V_m}$$

Where:
W_s = weight of volatile compounds in grams
W_w = weight of water in grams
W_{es} = weight of exempt compounds in grams
V_m = volume of material in liters

(13) HAND-APPLICATION METHODS are the methods used to apply coating to substrate by manually held, non-mechanically operated equipment. Such equipment includes paint brushes, hand rollers, caulking guns, trowels, spatulas, syringe daubers, rags, and sponges.

(14) HIGH-VOLUME, LOW-PRESSURE (HVLP) SPRAY is a coating application system which is operated between 0.1 and 10 psig flow pressure at the air cap/tip of the spray gun.

(15) HIGHWAY CONES are cones used to regulate traffic.

(16) INK is a fluid that contains dyes and/or colorants, and is used to make markings but not to protect surfaces.

(17) MASK COATING is thin film coating applied through a template to coat a small portion of a substrate.

(18) METALLIC COATING is a coating which contains more than 5 grams of metal particles per liter of coating as applied.

(19) METAL PARTICLES are pieces of a pure elemental metal or a combination of elemental metals.

(20) MILITARY SPECIFICATION COATING is a coating which has a formulation approved by the United States Military Agency for use on military equipment.

(21) MIRROR BACKING is the coating applied over the silvered surface of a mirror.

(22) MOLD SEAL COATING is the initial coating applied to a new mold or a repaired mold to provide a smooth surface which, when coated with a mold release coating, prevents products from sticking to the mold.

(23) MOTOR VEHICLE is a passenger car, light-duty truck, medium-duty vehicle, or heavy-duty vehicle as defined in Section 1900, Title 13, California Administrative Code.

(24) MULTI-COLORED COATING is a coating which exhibits more than one color when applied, and which is packaged in a single container and applied in a single coat.

(25) ONE-COMPONENT COATING is coating that is ready for application to form an acceptable dry film. A thinner necessary to reduce the viscosity is not considered a component.

(26) OPTICAL COATING is a coating applied to an optical lens.

(27) REPAIR COATING is a coating used to re-coat portions of a previously coated product which has sustained mechanical damage to the coating following normal coating operations.

(28) ROLL COATER is a type of coating application equipment that utilizes a series of mechanical rollers to form a thin coating film on the surface of a roller, which is then applied to a substrate by moving the substrate underneath the roller.

(29) SHOCK-FREE COATING is a coating applied to electrical components to protect the user from electric shock. The coating has characteristics of being of low capacitance and high resistance, and having resistance to breaking down under high voltage.

(30) STENCIL COATING is an ink or a coating which is rolled or brushed onto a template or stamp in order to add identifying letters and/or numbers.

(31) TOUCH-UP COATING is a coating used to cover minor imperfections appearing after the main coating operation.

(32) TRANSFER EFFICIENCY is the ratio of the weight or volume of coating solids adhering to an object to the total weight or volume,

respectively, of coating solids used in the application process, expressed as a percentage.

(33) TRANSLUCENT COATING is a coating which contains binders and pigment, and is formulated to form a colored, but not opaque, film.

(34) TWO-COMPONENT COATING is a coating requiring the addition of a separate reactive resin, commonly known as a catalyst, before application to form an acceptable dry film.

(35) VACUUM METALIZING is the process whereby metal is vaporized and deposited on a substrate in a vacuum chamber.

(36) VOLATILE ORGANIC COMPOUND (VOC) is any compound which contains the element carbon, excluding methane, carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates, ammonium carbonate, and exempt compounds other than carbon tetrachloride.

(b) Requirements

(1) Prohibition of Specifications

A person shall not specify the use, in the District, of any coating to be applied to any glass, rubber, or plastic subject to the provisions of this rule that does not meet the limits and requirements of this rule. The requirements of this paragraph shall apply to all written or oral contracts.

(2) A person shall not apply on plastics, glass, or rubber any coatings which are applied with a VOC content in excess of the limits specified below:

COATING	VOC LIMITS Less Water and Less Exempt Compounds	
	g/L	lbs/gal
General Coatings		
One-component	275	2.3
Two-component	420	3.5
Military Spec. Coating		
One-component	340	2.8
Two-component	420	3.5
Multi-Colored Coatings	685	5.7
Mold Seal Coatings	750	6.3
Vacuum Metalizing Coatings	800	6.7
Mirror Backing		
Curtain Coated	500	4.2
Roll Coated	430	3.6

COATING (Cont.)	VOC LIMITS Less Water and Less Exempt Compounds	
	g/L	lbs/gal
Optical Coatings	800	6.7
Electric Dissipating Coatings and Shock-Free Coatings	800	6.7
Metallic Coatings	420	3.5

(3) A person shall not use VOC-containing materials which contain more than 200 grams of VOC per liter of material for surface preparation or cleanup, excluding coating application equipment cleaning.

(4) Containers shall be used for the disposal of VOC-laden cloth or paper used in surface preparation, cleanup, and the removal of uncured coating, and shall be closed except when depositing or removing VOC-laden cloth or rags from the container.

(5) Containers shall be used for the disposal of VOC-laden cloth or paper used in stripping of cured coatings, and shall be closed except when depositing or removing VOC-laden cloth or paper from the container.

(6) A person shall not use VOC-containing materials for the cleanup of equipment used in coating operations unless:

(A) the VOC is collected in a container which is closed when not in use and properly disposed of, such that VOC is not emitted to the atmosphere; or

(B) the spray equipment is disassembled and cleaned in a solvent vat, and the vat is closed when not in use; or

(C) the cleanup materials contain 200 grams or less, by weight, of VOC per liter of material.

(7) A person shall not use VOC-containing materials which contain more than 200 grams of VOC per liter of material for the stripping of cured coatings.

(8) Solvent Cleaning Operations; Storage and Disposal of VOC-containing Materials. Paragraphs (b)(3), (b)(4), and (b)(6) above shall be superseded by paragraphs (c)(1), (c)(2), (c)(4), and (c)(6) of Rule 1171 - Solvent Cleaning Operations, on and after July 1, 1992.

(9) Notwithstanding the provisions of paragraph (b)(2), a person shall not apply on plastics, rubber, or glass any automotive coating used to match the existing coating of motor vehicles, including any VOC-containing materials added to the original coating as supplied by the manufacturer, in excess of the limits specified in Table 1 of subparagraph (c)(1)(A) of Rule 1151 for parts to be used on Group I Vehicles, as defined in Rule 1151, and in Table 2 of subparagraph (c)(1)(B) of Rule 1151 for parts to be used on Group II Vehicles, as defined in Rule 1151.

The provisions of this paragraph shall apply provided that the applicator submits a petition, in writing, to the Executive Officer which demonstrates the need to apply such coatings and receives written approval from the Executive Officer prior to the application of such coatings.

(10) Transfer Efficiency

Effective July 1, 1992, a person shall not apply coatings unless the coating is applied with equipment operated according to manufacturer's specifications, and by the use of one of the following methods:

(A) electrostatic application; or

(B) flow coater; or

(C) roll coater; or

(D) dip coater; or

(E) hand application methods; or

(F) high-volume, low-pressure (HVLP) spray; or

(G) such other alternative spray application methods as are demonstrated, in accordance with the provisions of paragraph (d)(4), to be capable of achieving equivalent or better transfer efficiency than the application method listed in subparagraph (b)(10)(F), and for which written approval of the Executive Officer has been obtained.

(11) Air Pollution Control Equipment

A person may comply with the provisions of paragraph (b)(2), (b)(9), or (b)(10) by using air pollution control equipment, provided that the VOC

emissions from such operations or materials are reduced in accordance with provisions of (A) and (B) below:

(A) The control device shall reduce VOC emissions from an emission collection system by at least 95 percent, by weight, or the concentration of VOC in the output of the air pollution control device shall be less than 50 PPM calculated as carbon with no dilution.

(B) The owner/operator demonstrates that the system collects at least 90 percent, by weight, of the VOC emissions generated by the sources of emissions.

(c) Recordkeeping Requirements

Records shall be maintained pursuant to Rule 109.

(d) Compliance Test Methods

For the purpose of this rule, the following test methods shall be used:

(1) The VOC content of materials subject to the provisions of this rule shall be determined by:

(A) The United States Environmental Protection Agency (USEPA) Reference Method 24 (Determination of Volatile Matter Content, Water Content, Density, Volume Solids, and Weight Solids of Surface Coatings, Code of Federal Regulations Title 40, Part 60, Appendix A). The exempt compound's content shall be determined by the South Coast Air Quality Management District's (SCAQMD) Laboratory Methods of Analysis for Enforcement Samples - Section III, Methods 19 and 22; or

(B) SCAQMD's Laboratory Methods of Analysis for Enforcement Samples - Section III, Methods 16, 17, 19, 22, and 24.

(C) The following classes of 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 sulfur bonds only to carbon and fluorine,

will be analyzed as exempt compounds for compliance with paragraph (b), only at such time as manufacturers specify which individual compounds are used in the coating formulations and identify the test methods, which, prior to such analysis, have been approved by the USEPA and the SCAQMD, that can be used to quantify the amounts of each exempt compound. VOC emissions determined to exceed any limits established by this rule through the use of the above-referenced test methods shall constitute a violation of the rule.

(2) The capture efficiency of the emissions collection system shall be determined by the USEPA method cited in 55 FR (Federal Register) 26865, June 29, 1990.

(3) The efficiency of the control device, and the VOC content measured and calculated as carbon in the control device exhaust gases, shall be determined by USEPA's Test Method 18, or Air Resources Board (ARB) Method 422 for the determination of emissions of exempt compounds and, USEPA's Test Method 25, 25A, or SCAQMD's Method 25.1 (Determination of Total Gaseous Non-Methane Organic Emissions as Carbon) for the determination of total organic compound emissions. Emissions determined to exceed any limits established by this rule through the use of any of the above-referenced test methods shall constitute a violation of the rule.

(4) The transfer efficiency of alternative coating application methods shall be determined in accordance with the SCAQMD method "Spray Equipment Transfer Efficiency Test Procedure for Equipment User, May 24, 1989."

(e) Alternative Emission Control

A person may achieve compliance with paragraph (b)(2) or (b)(9) by means of an Alternative Emission Control Plan pursuant to Rule 108.

(f) Rule 442 Applicability

Any coating, coating operation, or facility which is exempt from all or a portion of this rule shall comply with the provisions of Rule 442.

(g) Exemptions

(1) The provisions of paragraph (b)(2) shall not apply to the following:

(A) Touch-up and repair coatings;

(B) Stencil coatings applied on clear or transparent substrates;

(C) Clear or translucent coatings, except for those subject to paragraph (b)(9);

(D) Coatings applied at a paint manufacturing facility while conducting performance tests on the coatings;

(E) Any individual coating category used in volumes less than 50 gallons in any one year, if substitute compliant coatings are not available, provided that the total usage of all such coatings does not exceed 200 gallons per year, per facility;

(F) Reflective coating applied to highway cones;

(G) Mask coatings.

(i) Coatings that are less than 0.5 millimeter thick (dried) and the area coated is less than 25 square inches; or

(ii) Coatings that are less than 0.5 millimeter thick (dried) and/or the area coated is more than 25 square inches, and provided that a written petition is submitted to the Executive Officer which demonstrates, to the satisfaction of the Executive Officer, that compliant coatings are not available, and written approval is granted by the Executive Officer;

(H) EMI/RFI shielding coatings; and

(I) Heparin-benzalkonium chloride (HBAC) - containing coatings applied to medical devices, provided that the total usage of all such coatings does not exceed 100 gallons per year, per facility.

(2) The provisions of paragraph (b)(3) shall not apply to the cleaning of polycarbonates.

(3) The provisions of paragraph (b)(10) shall not apply to aerosol container applications.

ANTELOPE VALLEY AIR POLLUTION CONTROL DISTRICT

RULE 1146.1
EMISSIONS OF OXIDES OF NITROGEN FROM SMALL INDUSTRIAL, INSTITUTIONAL, AND COMMERCIAL BOILERS, STEAM GENERATORS, AND PROCESS HEATERS

(Adopted October 5, 1990)(Amended July 10, 1992)(Amended May 13, 1994)

(a) Definitions

1. ANNUAL HEAT INPUT means the actual amount of heat released by fuels burned in a unit during a calendar year, based on the fuel's higher heating value.
2. BOILER OR STEAM GENERATOR means any combustion equipment fired with liquid and/or gaseous and/or solid fossil fuel, used to produce steam or to heat water, and that is not used exclusively to produce electricity for sale. Boiler or Steam Generator does not include any waste heat recovery boiler that is used to recover sensible heat from the exhaust of a combustion turbine or any unfired waste heat recovery boiler that is used to recover sensible heat from the exhaust of any combustion equipment.
3. BTU means British thermal unit or units.
4. NO_x EMISSIONS means the sum of nitric oxide and nitrogen dioxide in the flue gas, collectively expressed as nitrogen dioxide.
5. PROCESS HEATER means any combustion equipment fired with liquid and/or gaseous and/or solid fossil fuel and which transfers heat from combustion gases to water or process streams. Process Heater does not include any kiln or oven used for drying, curing, baking, cooking, calcining, or vitrifying; or any unfired waste heat recovery heater that is used to recover sensible heat from the exhaust of any combustion equipment.
6. RATED HEAT INPUT CAPACITY means the heat input capacity specified on the nameplate of the combustion unit. If the combustion unit has been altered or modified such that its maximum heat input is different than the heat input capacity specified on the nameplate, the new maximum heat input shall be considered as the rated heat input capacity.
7. THERM means 100,000 Btu.
8. UNIT means any boiler, steam generator, or process heater as defined in paragraph (a)(2) or (a)(5).

(b) Applicability

This rule applies to boilers, steam generators, and process heaters that are greater than 2 million Btu per hour and less than 5 million Btu per hour rated heat input capacity used in any industrial, institutional, or commercial operation.

(c) Requirements

1. The owner or operator of any unit subject to subdivision (b) shall operate such unit so that it discharges into the atmosphere no more than 30 ppm of NO_x emissions or 0.037 pound NO_x per million Btu of heat input, as specified in the permit to operate and no more than 400 ppm of carbon monoxide. For each unit, a selection must be indicated in the application for permit to construct and operate between the ppm NO_x or pounds of NO_x per million BTU heat input compliance option.
2. Any unit(s) subject to subdivision (b), and with an annual heat input of less than or equal to 18,000 therms per calendar year, shall:

   (A) be operated in a manner that maintains stack-gas oxygen concentrations at less than or equal to 3 percent on a dry basis for any 15-consecutive-minute averaging period; or

(B) be tuned at least twice per year, (at intervals from 4 to 8 months apart) in accordance with the procedure described in Attachment 1 or the unit manufacturer's specified tuneup procedure. If a different tuneup procedure from that described in attachment 1 is used then a copy of this procedure shall be kept on site. If the unit does not operate throughout a continuous six-month period within a calendar year, only one tuneup is required for that calendar year. The owner or operator of any unit(s) who chooses to comply with subparagraph (c)(2)(B) shall maintain a record for a period of two years verifying that the tuneup has been performed. No tune-up is required during a calendar year for any unit that is not operated during that calendar year; this unit may be test fired to verify availability of the unit for its intended use but once test firing is completed it shall be shutdown. Records of test firings shall be maintained for a period of two years, and shall be made accessible upon request from an authorized District representative; or

(C) meet the emission limits specified in paragraph (c)(1).

3. The owner or operator of any unit(s) subject to paragraph (c)(2) shall submit and have approved by the Executive Officer, a compliance plan that demonstrates compliance with paragraph (c)(2). Such plan shall contain:

   (A) A list of permits of all units with the rated heat input capacity, anticipated annual heat input; and

   (B) For each unit listed, a selection of one of the three options specified in paragraph (c)(2) to achieve compliance with this rule; and

   (C) Non-resettable, totalizing fuel meter(s) specifications; date of installation; and recorded fuel usage since installation.

4. Any owner or operator who chooses the pound per million Btu of heat input compliance option in paragraph (c)(1) shall install a non-resettable, totalizing fuel meter for each fuel used on an individual unit basis, as approved by the Executive Officer.

(d) Compliance Determination

1. Owners or operators of any units shall have the option of complying with either the pound per million Btu of heat input or parts per million emission limits specified in paragraphs (c)(1) and (c)(2)(C).
2. All emission determinations shall be made in the as-found operating condition, except no compliance determination shall be established during unit start up, shutdown, or under breakdown conditions. Start up or shutdown intervals shall not last longer than is necessary to reach stable temperatures. In no case shall the start up or shutdown interval last longer than six hours or the time specified in the permit to operate, whichever is less. Start-ups and shutdowns shall not last longer than is necessary to reach stable conditions.
3. All parts per million emission limits specified in paragraph (c)(1) are referenced at 3 percent volume stack-gas oxygen on a dry basis averaged over a period of 15 consecutive minutes.
4. Compliance with the NO_X and CO emission requirements of paragraph (c)(1) and the stack-gas oxygen concentration requirement of paragraph (c)(2)(A) shall be determined according to procedures in District Source Test Method 100.1 - Instrumental Analyzer Procedures for Continuous Gaseous Emission Sampling (March 1989), or Method 7.1 - Determination of Nitrogen Oxide Emissions from Stationary Sources (March 1989) and Method 10.1 - Carbon Monoxide and Carbon Dioxide by Gas Chromatograph/Non-Dispersive Infrared Detector (GC/NDIR) - Oxygen by Gas Chromatograph-Thermal Conductivity (GC/TCD) (March 1989), or any other test method determined to be equivalent and approved before the test in writing by the Executive Officers of the District and the California Air Resources Board and the Regional Administrator of the United States Environmental Protection Agency, Region IX. Records of all source tests shall be maintained for a period of two years and shall be made available to District personnel upon request. Emissions determined to exceed any limits established by this rule through the use of any of the above-referenced test methods shall constitute a violation of this rule.
5. For any owner or operator who chooses the pounds of NO_X per million Btu of heat input compliance option of paragraph (c)(1), NO_X emissions in pounds per million Btu of heat input shall be calculated using the procedures

in 40 CFR Part 60, Appendix A, Method 19, Sections 2 and 3.

(e) Compliance Schedule

The owner or operator of units subject to this rule shall meet the following increments of progress:

1. For owners or operators of units subject to paragraph (c)(1) shall:

   (A) By January 1, 1993, submit required applications for permits to construct and operate, and

   (B) By July 1, 1994, demonstrate compliance with paragraph (c)(1).

2. For owners or operators of units subject to paragraph (c)(2) shall:

   (A) By January 1, 1993, submit a plan pursuant to paragraph (c)(3), and

   (B) By December 31, 1993, demonstrate compliance with paragraph (c)(2).

(f) Exemption

The provisions of paragraph (c)(1) shall not apply provided the owner or operator:

1. Installs by January 1, 1992, or at the time the permit to construct for the unit is issued, a non-resettable, totalizing fuel meter for each fuel that demonstrates that the unit(s) operate with an annual heat input at or below 18,000 therms per calendar year; and
2. Has available for inspection by the Executive Officer by February 1 of each year, records listing cumulative annual usage of each fuel for the preceding calendar year. Records shall be maintained and made accessible to the Executive Officer or authorized District representative for a period of two years; and
3. Demonstrates compliance with the requirements specified in subparagraphs (c)(2)(A) or (c)(2)(B), and (c)(3).

(g) Loss of Exemption

If any unit subject to a compliance plan submitted pursuant to paragraph (c)(3) exceeds 18,000 therms of annual heat input in any calendar year after 1992, the owners or operators shall:

1. Within 4 months after the end of the calendar year during which the unit exceeded 18,000 therms of annual heat input, submit required applications for permits to construct and operate; and
2. Within 18 months after the end of the calendar year during which the unit exceeded 18,000 therms of annual heat input, demonstrate and maintain compliance with paragraph (c)(1) for the life of the unit; and
3. Maintain compliance with requirements of paragraph (c)(2) until compliance with paragraph (c)(1).

ATTACHMENT 1

A. Equipment Tuning Procedure[1] for Forced-Draft Boilers, Steam Generators, and Process Heaters

Nothing in this Equipment Tuning Procedure shall be construed to require any act or omission that would result in unsafe conditions or would be in violation of any regulation or requirement established by Factory Mutual, Industrial Risk Insurers, National Fire Prevention Association, the California Department of Industrial Relations (Occupational Safety and Health Division), the Federal Occupational Safety and Health Administration, or other relevant regulations and requirements.

1. Operate the unit at the firing rate most typical of normal operation. If the unit experiences significant load

variations during normal operation, operate it at its average firing rate.

2. At this firing rate, record stack gas temperature, oxygen concentration, and CO concentration (for gaseous fuels) or smoke-spot number[2] (for liquid fuels), and observe flame conditions after unit operation stabilizes at the firing rate selected. If the excess oxygen in the stack gas is at the lower end of the range of typical minimum values[3], and if CO emissions are low and there is not smoke, the unit is probably operating at near optimum efficiency - at this particular firing rate.
3. Increase combustion air flow to the furnace until stack gas oxygen levels increase by one to two percent over the level measured in Step 2. As in Step 2, record the stack gas temperature, CO concentration (for gaseous fuels) or smoke-spot number (for liquid fuels), and observe flame conditions for these higher oxygen levels after boiler operation stabilizes.

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[1]This tuning procedure is based on a tune-up procedure developed by KVB, Inc. for the United States EPA.

[2]The smoke-spot number can be determined with ASTM Test Method D-2156 or with the Bacharach method. ASTM Test Method D-2156 is included in a tuneup kit that can be purchased from the Bacharach Company.

[3]Typical minimum oxygen levels for boilers at high firing rates are:

1. For natural gas: 0.5% - 3%

2. For liquid fuels: 2% - 4%

However, complete the remaining portion of this procedure to determine whether still lower oxygen levels are practical.

1. Decrease combustion air flow until the stack gas oxygen concentration is at the level measured in Step 2. From this level gradually reduce the combustion air flow, in small increments. After each increment, record the stack gas temperature, oxygen concentration, CO concentration (for gaseous fuels) and smoke-spot number (for liquid fuels). Also observe the flame and record any changes in its condition.
2. Continue to reduce combustion air flow stepwise, until one of these limits is reached:

   a. Unacceptable flame conditions - such as flame impingement on furnace walls or burner parts, excessive flame carryover, or flame instability.

   b. Stack gas CO concentrations greater than 400 ppm.

   c. Smoking at the stack.

   d. Equipment-related limitations - such as low windbox/furnace pressure differential, built in air-flow limits, etc.

3. Develop an O_2/CO curve (for gaseous fuels) or O_2/smoke curve (for liquid fuels) similar to those shown in Figures 1 and 2 using the excess oxygen and CO or smoke-spot number data obtained at each combustion air flow setting.
4. From the curves prepared in Step 6, find the stack gas oxygen levels where the CO emissions or smoke-spot number equal the following values:

Fuel	Measurement	Value
Gaseous	CO Emissions	400 ppm
#1 and #2 oils	smoke-spot number	number 1
#4 oil	smoke-spot number	number 2
#5 oil	smoke-spot number	number 3
Other oils	smoke-spot number	number 4

The above conditions are referred to as the CO or smoke thresholds, or as the minimum excess oxygen level.

Compare this minimum value of excess oxygen to the expected value provided by the combustion unit manufacturer. If the minimum level found is substantially higher than the value provided by the combustion unit manufacturer, burner adjustments can probably be made to improve fuel and air mixing, thereby allowing operation with less air.

1. Add 0.5 to 2.0 percent of the minimum excess oxygen level found in Step 7 and reset burner controls to operate automatically at this higher stack gas oxygen level. This margin above the minimum oxygen level accounts for fuel variations, variations in atmospheric conditions, load changes, and nonrepeatability or play in automatic controls.
2. If the load of the combustion unit varies significantly during normal operation, repeat Steps 1-8 for firing rates that represent the upper and lower limits of the range of the load. Because control adjustments at one firing rate may affect conditions at other firing rates, it may not be possible to establish the optimum excess oxygen level at all firing rates. If this is the case, choose the burner control settings that give best performance over the range of firing rates. If one firing rate predominates, settings should optimize conditions at that rate.
3. Verify that the new settings can accommodate the sudden load changes that may occur in daily operation without adverse effects. Do this by increasing and decreasing load rapidly while observing the flame and stack. If any of the conditions in Step 5 result, reset the combustion controls to provide a slightly higher level of excess oxygen at the affected firing rates. Next, verify these new settings in a similar fashion. Then make sure that the final control settings are recorded at steady-state operating conditions for future reference.
4. When the above checks and adjustments have been made, record data and attach combustion analysis data to boiler, steam generator, or heater records indicating name and signature of person, title, and date the tuneup was performed.

B. Equipment Tuning Procedure for Natural Draft-Fired Boilers, Steam Generators, and Process Heaters**.**

Nothing in this Equipment Tuning Procedure shall be construed to require any act or omission that would result in unsafe conditions or would be in violation of any regulation or requirement established by Factory Mutual, Industrial Risk Insurers, National Fire Prevention Association, the California Department of Industrial Relations (Occupational Safety and Health Division), the Federal Occupational Safety and Health Administration, or other relevant codes, regulations, and equipment manufacturers specifications and operating manuals.

Should a different tuning procedure be used, a copy of this procedure should be kept with the unit records for two years and made available to the District personnel on request.

1. **PRELIMINARY ANALYSIS**

   a. CHECK THE OPERATING PRESSURE OR TEMPERATURE.

   Operate the boiler, steam generator, or heater at the lowest acceptable pressure or temperature that will satisfy the load demand. This will minimize heat and radiation losses. Determine the pressure or temperature that will be used as a basis for comparative combustion analysis before and after tuneup.

   b. CHECK OPERATING HOURS.

   Plan the workload so that the boiler, steam generator, or process heater operates only the minimum hours and days necessary to perform the work required. Fewer operating hours will reduce fuel use and emissions. For units requiring a tuneup to comply with the rule, a totalizing non-resettable fuel meter will be required for each fuel used and for each boiler, steam generator, and heater to prove fuel consumption is less than the heat input limit in therms per year specified in the rule.

   c. CHECK AIR SUPPLY.

Sufficient fresh air supply is essential to ensure optimum combustion and the area of air supply openings must be in compliance with applicable codes and regulations. Air openings must be kept wide open when the burner is firing and clear from restriction to flow.

d. CHECK VENT.

Proper venting is essential to assure efficient combustion. Insufficient draft or overdraft promotes hazards and inefficient burning. Check to be sure that vent is in good condition, sized properly and with no obstructions.

e. COMBUSTION ANALYSIS.

Perform an "as is" combustion analysis (CO, O_2, etc.) with a warmed up unit at high and low fire, if possible. In addition to data obtained from combustion analysis, also record the following:

i. Inlet fuel pressure at burner (at high & low fire)

ii. Draft above draft hood or barometric damper

1) Draft hood: high, medium, and low

2) Barometric Damper: high, medium, and low

iii. Steam pressure, water temperature, or process fluid pressure or temperature entering and leaving the boiler, steam generator, or process heater.

iv. Unit rate if meter is available.

With above conditions recorded, make the following checks and corrective actions as necessary:

2. **CHECKS & CORRECTIONS**

a. CHECK BURNER CONDITION.

Dirty burners or burner orifices will cause boiler, steam generator, or process heater output rate and thermal efficiency to decrease. Clean burners and burner orifices thoroughly. Also, ensure that fuel filters and moisture traps are in place, clean, and operating properly, to prevent plugging of gas orifices. Confirm proper location and orientation of burner diffuser spuds, gas canes, etc. Look for any burned-off or missing burner parts, and replace as needed.

b. CHECK FOR CLEAN BOILER, STEAM GENERATOR, OR PROCESS HEATER TUBES & HEAT TRANSFER SURFACES.

External and internal build-up of sediment and scale on the heating surfaces creates an insulating effect that quickly reduces unit efficiency. Excessive fuel cost will result if the unit is not kept clean. Clean tube surfaces, remove scale and soot, assure proper process fluid flow and flue gas flow.

c. CHECK WATER TREATMENT & BLOWDOWN PROGRAM.

Soft water and the proper water or process fluid treatment must be uniformly used to minimize scale and corrosion. Timely flushing and periodic blowdown must be employed to eliminate sediment and scale build-up on a boiler, steam generator or process heater.

d. CHECK FOR STEAM, HOT WATER OR PROCESS FLUID LEAKS

Repair all leaks immediately since even small high-pressure leaks quickly lead to considerable fuel, water and steam losses. Be sure there are no leaks through the blow-off, drains, safety valve, by-pass lines or at the feed

pump, if used.

3. **SAFETY CHECKS**

   a. Test primary and secondary low water level controls.

   b. Check operating and limit pressure and temperature controls.

   c. Check pilot safety shut off operation.

   d. Check safety valve pressure and capacity to meet boiler, steam generator or process heater requirements.

   e. Check limit safety control and spill switch.

4. **ADJUSTMENTS**

   While taking combustion readings with a warmed up boiler, steam generator, or process heater at high fire perform checks and adjustments as follows:

   a. Adjust unit to fire at rate; record fuel manifold pressure.

   b. Adjust draft and/or fuel pressure to obtain acceptable, clean combustion at both high, medium and low fire. Carbon Monoxide (CO) value should always be below 400 parts per million (PPM) at 3% 0_2. If CO is high make necessary adjustments.

   Check to ensure boiler, steam generator, or process heater light offs are smooth and safe. A reduced fuel pressure test at both high and low fire should be conducted in accordance with the manufacturers instructions and maintenance manuals.

   c. Check and adjust operation of modulation controller. Ensure proper, efficient and clean combustion through range of firing rates.

   When above adjustments and corrections have been made, record all data.

5. **FINAL TEST**

   Perform a final combustion analysis with a warmed up boiler, steam generator, or process heater at high, medium and low fire, whenever possible. In addition to data from combustion analysis, also check and record:

   a. Fuel pressure at burner (High, Medium, and Low).

   b. Draft above draft hood or barometric damper (High, Medium and Low).

   c. Steam pressure or water temperature entering and leaving boiler, steam generator, or process heater.

   d. Unit rate if meter is available.

   When the above checks and adjustments have been made, record data and attach combustion analysis data to boiler, steam generator, or process heater records indicating name and signature of person, title, company name, company address and date the tuneup was performed.

ANTELOPE VALLEY AIR POLLUTION CONTROL DISTRICT

RULE 1146.
EMISSIONS OF OXIDES OF NITROGEN FROM INDUSTRIAL, INSTITUTIONAL, AND COMMERCIAL BOILERS, STEAM GENERATORS, AND PROCESS HEATERS

(Adopted September 9, 1988)(Amended January 6, 1989)(Amended May 13, 1994)

(a) Definitions

1. ANNUAL CAPACITY FACTOR means the ratio of the amount of fuel burned by a unit in a calendar year to the amount of fuel it could have burned if it had operated at the rated heat input capacity for 100 percent of the time during the calendar year.
2. ANNUAL HEAT INPUT means the actual amount of heat released by fuels burned in a unit during a calendar year.
3. BOILER or STEAM GENERATOR means any combustion equipment fired with liquid and/or gaseous and/or solid fossil fuel and used to produce steam or to heat water and that is not used exclusively to produce electricity for sale. Boiler or Steam Generator does not include any waste heat recovery boiler that is used to recover sensible heat from the exhaust of a combustion turbine or any unfired waste heat recovery boiler that is used to recover sensible heat from the exhaust of any combustion equipment.
4. BTU means British thermal unit.
5. HEAT INPUT means the chemical heat released due to fuel combustion in a unit, using the higher heating value of the fuel. This does not include the sensible heat of incoming combustion air.
6. NO_x EMISSIONS means the sum of nitric oxide and nitrogen dioxide in the flue gas, collectively expressed as nitrogen dioxide.
7. PROCESS HEATER means any combustion equipment fired with liquid and/or gaseous and/or solid fossil fuel and which transfers heat from combustion gases to water or process streams. Process Heater does not include any kiln or oven used for drying, curing, baking, cooking, calcining, or vitrifying; or any unfired waste heat recovery heater that is used to recover sensible heat from the exhaust of any combustion equipment.
8. RATED HEAT INPUT CAPACITY means the heat input capacity specified on the nameplate of the combustion unit. If the combustion unit has been altered or modified such that its maximum heat input is different than the heat input capacity specified on the nameplate, the new maximum heat input shall be considered as the rated heat input capacity.
9. THERM means 100,000 Btu.
10. UNIT means any boiler, steam generator, or process heater as defined in subparagraph (3) or (7) of this paragraph.

(b) Applicability

This rule applies to boilers, steam generators, and process heaters of equal to or greater than 5 million Btu per hour rated heat input capacity used in all industrial, institutional, and commercial operations with the exception of:

1. boilers used by electric utilities to generate electricity; and
2. boilers and process heaters with a rated heat input capacity greater than 40 million Btu per hour that are used in petroleum refineries; and
3. sulfur plant reaction boilers.

(c) Requirements

1. The owner or operator of any unit(s) shall not discharge into the atmosphere oxides of nitrogen, expressed as nitrogen dioxide (NO_2), in excess of the concentrations shown in the following table.

Input Capacity		Rated Heat Annual Heat Input	Gaseous, Liquid or Solid Fossil Fuels
Equal to, or greater than, 5 million Btu per hour	And	Greater than $9x10^9$ Btu per year (90,000 Therms) fuel use	40 ppm (0.05 lb per 10^6 Btu of heat input)
Equal to, or greater than, 40 million Btu per hour	And	Greater than 25% annual capacity factor	30 ppm
Equal to, or greater than, 40 million Btu per hour	And	Equal to, or greater than, 25% annual capacity factor and greater $9x10^9$ Btu (90,000 Therms) per year fuel use	40 ppm

Carbon monoxide (CO) emissions from unit(s) subject to this subparagraph shall not exceed 400 ppm.

2. Any unit(s) with a rated heat input capacity greater than or equal to 5 million Btu per hour and an annual heat input less than or equal to 9.0×10^9 Btu per year, shall:

   (A) be operated in a manner that maintains stack gas oxygen concentrations at less than or equal to 3 percent on a dry basis for any 15-consecutive-minute averaging period; or

   (B) be tuned at least twice per year, (at intervals from 4 to 8 months apart) in accordance with the procedure described in Attachment 1 or the unit manufacturer's specified tuneup procedure. If a different tuneup procedure from that described in Attachment 1 is used then a copy of this procedure shall be kept on site. If the unit does not operate throughout a continuous six-month period within a calendar year, only one tuneup is required for that calendar year. The operator of any unit(s) who specifies the tuneup option shall maintain a record for a period of two years verifying that the tuneup has been performed. No tune-up is required during a calendar year for any unit that is not operated during that calendar year; this unit may be test fired to verify availability of the unit for its intended use but once the test firing is completed the unit shall be shutdown. Records of test firings shall be maintained for a period of two years, and shall be made accessible to an authorized District representative upon request; or

   (C) meet the NO_x and CO emission limits specified in paragraph (c)(1).

3. The owner or operator of any unit(s) subject to subparagraph (c)(2) shall submit for the approval of the Executive Officer a compliance plan that demonstrates compliance with subparagraph (c)(2). Such plan shall contain:

   (A) A list of permits of all units with the rated heat input capacity and anticipated annual heat input.

   (B) For each unit listed, a selection of one of the three options specified in subparagraph (c)(2) to achieve compliance with this rule.

   (C) Nonresettable fuel totalizing meter specifications for each fuel used, date of meter installation, records of fuel use for each unit during the last two years starting from March 1, 1991. The plan shall be disapproved if for any continuous 12-month period, the annual fuel usage exceeds 90,000 therms. In this case the unit shall have to comply with the emission limits specified in paragraph (c)(1).

4. Any unit(s) with a rated heat input capacity greater than or equal to 40 million Btu per hour and an annual heat input greater than 200×10^9 Btu per year shall have a continuous in-stack nitrogen oxides monitor or equivalent verification system in compliance with 40 CFR part 60 Appendix B Specification 2. Maintenance and emission records shall be maintained and made accessible for a period of two years as to the Executive Officer.
5. Any owner or operator who chooses the pound per million Btu compliance option specified in subparagraph (c)(1) shall install a totalizing fuel meter to measure the total of each fuel used by each individual unit, as approved by the Executive Officer.
6. Any owner or operator of a unit not covered under the provisions of subparagraphs (c)(1) or (c)(4) based on

annual heat input, shall:

(A) have installed by February 1, 1989 for units with a rated heat input capacity equal to or greater than 5 but less than 40 million Btu per hour, or by May 1, 1989 for units with a rated heat input capacity equal to or greater than 40 million Btu per hour, or at the time the unit is constructed, a totalizing meter for each fuel that demonstrates that the unit(s) operated at or below the applicable heat input levels; and

(B) have available for inspection by the Executive Officer by March 1 of each year, records listing cumulative annual usage of each fuel for the preceding calendar year. Records shall be maintained and made accessible to the Executive Officer for a period of two years; and

(C) demonstrate that the annual heat input is less than or equal to the applicable amount listed in subparagraph (c)(1) and/or (c)(4).

7. If any unit subject to a compliance plan submitted pursuant to paragraph (c)(3) exceeds 90,000 therms of annual heat input from all fuels used in any calendar year after 1991, the operators shall:

   (A) Within 4 months after the end of the calendar year during which the unit exceeded 90,000 therms of annual heat input, submit required applications for permits to construct and operate; and

   (B) Within 18 months after the end of the calendar year during which the unit exceeded 90,000 therms of annual heat input, demonstrate and maintain compliance with paragraph (c)(1) and if applicable (c)(4) for the life of the unit; and

   (C) Maintain compliance with requirements of paragraph (c)(2) until compliance with paragraph (c)(1) and, if applicable, (c)(4).

(d) Compliance Determination

1. An owner or operator of any unit(s) shall have the option of complying with either the pound per million Btu or parts per million emission limits specified in subparagraph (c)(1).
2. All emission determinations shall be made in the as-found operating condition, except no compliance determination shall be established during start-up, shutdown, or under breakdown conditions.
3. All parts per million emission limits specified in paragraph (c) are referenced at 3 percent volume stack gas oxygen on a dry basis averaged over a period of 15 consecutive minutes.
4. Compliance with the NO_x and CO emission requirements of paragraph (c)(1) and the stack-gas oxygen concentration requirement of paragraph (c)(2)(A) shall be determined according to procedures in District Source Test Method 100.1 - Instrumental Analyzer Procedures for Continuous Gaseous Emission Sampling (March 1989), or Method 7.1 - Determination of Nitrogen Oxide Emissions from Stationary Sources (March 1989) and Method 10.1 - Carbon Monoxide and Carbon Dioxide by Gas Chromatograph/Non-Dispersive Infrared Detector (GC/NDIR) - Oxygen by Gas Chromatograph-Thermal Conductivity (GC/TCD) (March 1989), or any other test method determined to be equivalent and approved before the test in writing by the Executive Officers of the District and the California Air Resources Board and the Regional Administrator of the United States Environmental Protection Agency, Region IX. Records of all source tests shall be maintained for a period of two years and shall be made available to District personnel upon request. Emissions determined to exceed any limits established by this rule through the use of any of the above-referenced test methods shall constitute a violation of this rule.
5. For any operator who chooses the pound per million Btu of heat input compliance option of paragraph (c)(1), NO_x emissions in pounds per million Btu of heat input shall be calculated using procedures in 40 CFR Part 60, Appendix A, Method 19, Sections 2 and 3.

(e) Compliance Schedule

The owner or operator of units subject to this rule shall meet the following increments of progress:

1. For owners or operators of units subject to subparagraph (c)(2), as of March 1, 1990, demonstrate final compliance with subparagraph (c)(2).
2. For owners or operators of units with a rated heat input capacity equal to or greater than 10 million Btu per hour or equal to or greater than 40 million Btu per hour and less than 25 percent annual capacity factor that are subject to the 40 ppm emission limit specified in subparagraph (c)(1): As of September 1, 1991, demonstrate compliance with subparagraph (c)(1) and, if applicable, subparagraph (c)(4).
3. For owners or operators of units with a rated heat input capacity equal to or greater than 5 million Btu per hour, but less than 10 million Btu per hour, that are subject to the 40 ppm emission limit specified in subparagraph (c)(1): As of March 1, 1992, demonstrate compliance with subparagraph (c)(1).
4. For owners or operators of units with a rated heat input capacity equal to or greater than 40 million Btu per hour and an annual capacity factor greater than 25% that are subject to the 30 ppm emission limit specified in subparagraph (c)(1): As of July 1, 1993, demonstrate compliance with subparagraph (c)(1), and if applicable, demonstrate compliance with subparagraph (c)(4).

   The provisions of subparagraph (c)(1) and/or (c)(4) shall become applicable for the life of the unit on March 1, of any calendar year if that unit operated for the previous calendar year at an annual heat input greater than the annual applicable heat input levels.

ATTACHMENT 1

A. Equipment Tuning Procedure[1] for Forced-Draft Boilers, Steam Generators, and Process Heaters

Nothing in this Equipment Tuning Procedure shall be construed to require any act or omission that would result in unsafe conditions or would be in violation of any regulation or requirement established by Factory Mutual, Industrial Risk Insurors, National Fire Prevention Association, the California Department of Industrial Relations (Occupational Safety and Health Division), the Federal Occupational Safety and Health Administration, or other relevant regulations and requirements.

Should a different tuning procedure be used, a copy of this procedure should be kept with the unit records for two years and made available to the District personnel on request.

1. Operate the unit at the firing rate most typical of normal operation. If the unit experiences significant load variations during normal operation, operate it at its average firing rate.
2. At this firing rate, record stack gas temperature, oxygen concentration, and CO concentration (for gaseous fuels) or smoke-spot number[2] (for liquid fuels), and observe flame conditions after unit operation stabilizes at the firing rate selected. If the excess oxygen in the stack gas is at the lower end of the range of typical minimum values[3], and if CO emissions are low and there is not smoke, the unit is probably operating at near optimum efficiency - at this particular firing rate.

   However, complete the remaining portion of this procedure to determine whether still lower oxygen levels are practical.

3. Increase combustion air flow to the furnace until stack gas oxygen levels increase by one to two percent over the level measured in Step 2. As in Step 2, record the stack gas temperature, CO concentration (for gaseous fuels) or smoke-spot number (for liquid fuels), and observe flame conditions for these higher oxygen levels after boiler operation stabilizes.
4. Decrease combustion air flow until the stack gas oxygen concentration is at the level measured in Step 2. From this level gradually reduce the combustion air flow, in small increments. After each increment, record the stack gas temperature, oxygen concentration, CO concentration (for gaseous fuels) and smoke-spot number (for liquid fuels). Also observe the flame and record any changes in its condition.
5. Continue to reduce combustion air flow stepwise, until one of these limits is reached:
   a. Unacceptable flame conditions - such as flame impingement on furnace walls or burner parts, excessive flame carryover, or flame instability.

b. Stack gas CO concentrations greater than 400 ppm.

c. Smoking at the stack.

d. Equipment-related limitations - such as low windbox/furnace pressure differential, built in air-flow limits, etc.

6. Develop an O_2/CO curve (for gaseous fuels) or O_2/smoke curve (for liquid fuels) similar to those shown in Figures 1 and 2 using the excess oxygen and CO or smoke-spot number data obtained at each combustion air flow setting.
7. From the curves prepared in Step 6, find the stack gas oxygen levels where the CO emissions or smoke-spot number equal the following values:

Fuel	Measurement	Value
Gaseous	CO Emissions	400 ppm
#1 and #2 oils	smoke-spot number	number 1
#4 oil	smoke-spot number	number 2
#5 oil	smoke-spot number	number 3
Other oils	smoke-spot number	number 4

The above conditions are referred to as the CO or smoke thresholds, or as the minimum excess oxygen level.

Compare this minimum value of excess oxygen to the expected value provided by the combustion unit manufacturer. If the minimum level found is substantially higher than the value provided by the combustion unit manufacturer, burner adjustments can probably be made to improve fuel and air mixing, thereby allowing operation with less air.

8. Add 0.5 to 2.0 percent of the minimum excess oxygen level found in Step 7 and reset burner controls to operate automatically at this higher stack gas oxygen level. This margin above the minimum oxygen level accounts for fuel variations, variations in atmospheric conditions, load changes, and nonrepeatability or play in automatic controls.
9. If the load of the combustion unit varies significantly during normal operation, repeat Steps 1-8 for firing rates that represent the upper and lower limits of the range of the load. Because control adjustments at one firing rate may affect conditions at other firing rates, it may not be possible to establish the optimum excess oxygen level at all firing rates. If this is the case, choose the burner control settings that give best performance over the range of firing rates. If one firing rate predominates, settings should optimize conditions at that rate.
10. Verify that the new settings can accommodate the sudden load changes that may occur in daily operation without adverse effects. Do this by increasing and decreasing load rapidly while observing the flame and stack. If any of the conditions in Step 5 result, reset the combustion controls to provide a slightly higher level of excess oxygen at the affected firing rates. Next, verify these new settings in a similar fashion. Then make sure that the final control settings are recorded at steady-state operating conditions for future reference.
11. When the above checks and adjustments have been made, record data and attach combustion analysis data to boiler, steam generator, or heater records indicating name and signature of person, title, and date the tuneup was performed.

B. Equipment Tuning Procedure for Natural Draft-Fired Boilers, Steam Generators, and Process Heaters.

Nothing in this Equipment Tuning Procedure shall be construed to require any act or omission that would result in unsafe conditions or would be in violation of any regulation or requirement established by Factory Mutual, Industrial Risk Insurers, National Fire Prevention Association, the California Department of Industrial Relations (Occupational Safety and Health Division), the Federal Occupational Safety and Health Administration, or other relevant codes, regulations, and equipment manufacturers specifications and operating manuals.

Should a different tuning procedure be used, a copy of this procedure should be kept with the unit records for two years and made available to the District personnel on request.

1. **PRELIMINARY ANALYSIS**

   a. CHECK THE OPERATING PRESSURE OR TEMPERATURE.

   Operate the boiler, steam generator, or heater at the lowest acceptable pressure or temperature that will satisfy the load demand. This will minimize heat and radiation losses. Determine the pressure or temperature that will be used as a basis for comparative combustion analysis before and after tuneup.

   b. CHECK OPERATING HOURS.

   Plan the workload so that the boiler, steam generator, or process heater operates only the minimum hours and days necessary to perform the work required. Fewer operating hours will reduce fuel use and emissions. For units requiring a tuneup to comply with the rule, a totalizing non-resettable fuel meter will be required for each fuel used and for each boiler, steam generator, and heater to prove fuel consumption is less than the heat input limit in therms per year specified in the rule.

   c. CHECK AIR SUPPLY.

   Sufficient fresh air supply is essential to ensure optimum combustion and the area of air supply openings must be in compliance with applicable codes and regulations. Air openings must be kept wide open when the burner is firing and clear from restriction to flow.

   d. CHECK VENT.

   Proper venting is essential to assure efficient combustion. Insufficient draft or overdraft promotes hazards and inefficient burning. Check to be sure that vent is in good condition, sized properly and with no obstructions.

   e. COMBUSTION ANALYSIS.

   Perform an "as is" combustion analysis (CO, O_2, etc.) with a warmed up unit at high and low fire, if possible. In addition to data obtained from combustion analysis, also record the following:

      i. Inlet fuel pressure at burner (at high & low fire)

      ii. Draft above draft hood or barometric damper

         1) Draft hood: high, medium, and low

         2) Barometric Damper: high, medium, and low

      iii. Steam pressure, water temperature, or process fluid pressure or temperature entering and leaving the boiler, steam generator, or process heater.

      iv. Unit rate if meter is available.

   With above conditions recorded, make the following checks and corrective actions as necessary:

2. **CHECKS & CORRECTIONS**

   a. CHECK BURNER CONDITION.

   Dirty burners or burner orifices will cause boiler, steam generator, or process heater output rate and thermal efficiency to decrease. Clean burners and burner orifices thoroughly. Also, ensure that fuel filters and moisture

traps are in place, clean, and operating properly, to prevent plugging of gas orifices. Confirm proper location and orientation of burner diffuser spuds, gas canes, etc. Look for any burned-off or missing burner parts, and replace as needed.

b. CHECK FOR CLEAN BOILER, STEAM GENERATOR, OR PROCESS HEATER TUBES & HEAT TRANSFER SURFACES.

External and internal build-up of sediment and scale on the heating surfaces creates an insulating effect that quickly reduces unit efficiency. Excessive fuel cost will result if the unit is not kept clean. Clean tube surfaces, remove scale and soot, assure proper process fluid flow and flue gas flow.

c. CHECK WATER TREATMENT & BLOWDOWN PROGRAM.

Soft water and the proper water or process fluid treatment must be uniformly used to minimize scale and corrosion. Timely flushing and periodic blowdown must be employed to eliminate sediment and scale build-up on a boiler, steam generator or process heater.

d. CHECK FOR STEAM, HOT WATER OR PROCESS FLUID LEAKS.

Repair all leaks immediately since even small high-pressure leaks quickly lead to considerable fuel, water and steam losses. Be sure there are no leaks through the blow-off, drains, safety valve, by-pass lines or at the feed pump, if used.

3. **SAFETY CHECKS**

a. Test primary and secondary low water level controls.

b. Check operating and limit pressure and temperature controls.

c. Check pilot safety shut off operation.

d. Check safety valve pressure and capacity to meet boiler, steam generator or process heater requirements.

e. Check limit safety control and spill switch.

4. **ADJUSTMENTS**

While taking combustion readings with a warmed up boiler, steam generator, or process heater at high fire perform checks and adjustments as follows:

a. Adjust unit to fire at rate; record fuel manifold pressure.

b. Adjust draft and/or fuel pressure to obtain acceptable, clean combustion at both high, medium and low fire. Carbon Monoxide (CO) value should always be below 400 parts per million (PPM) at 3% 0_2. If CO is high make necessary adjustments.

Check to ensure boiler, steam generator, or process heater light offs are smooth and safe. A reduced fuel pressure test at both high and low fire should be conducted in accordance with the manufacturers instructions and maintenance manuals.

c. Check and adjust operation of modulation controller. Ensure proper, efficient and clean combustion through range of firing rates.

When above adjustments and corrections have been made, record all data.

5. **FINAL TEST**

Perform a final combustion analysis with a warmed up boiler, steam generator, or process heater at high, medium and low fire, whenever possible. In addition to data from combustion analysis, also check and record:

a. Fuel pressure at burner (High, Medium, and Low).

b. Draft above draft hood or barometric damper (High, Medium and Low).

c. Steam pressure or water temperature entering and leaving boiler, steam generator, or process heater.

d. Unit rate if meter is available.

When the above checks and adjustments have been made, record data and attach combustion analysis data to boiler, steam generator, or process heater records indicating name and signature of person, title, company name, company address and date the tuneup was performed.

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[1]This tuning procedure is based on a tune-up procedure developed by KVB, Inc. for the United States EPA.

[2]The smoke-spot number can be determined with ASTM Test Method D-2156 or with the Bacharach method. ASTM Test Method D-2156 is included in a tuneup kit that can be purchased from the Bacharach Company.

[3]Typical minimum oxygen levels for boilers at high firing rates are:

1. For natural gas: 0.5% - 3%

2. For liquid fuels: 2% - 4%

ANTELOPE VALLEY AIR POLLUTION CONTROL DISTRICT

RULE 1150.1
CONTROL OF GASEOUS EMISSIONS FROM ACTIVE LANDFILLS

(Adopted April 5, 1985)

(a) Summary

The purpose of this rule is to reduce gaseous emissions from active landfills to prevent public nuisance and possible detriment to public health caused by exposure to such emissions. The rule requires in an active landfill, a landfill gas control system approved by the Executive Officer.

The rule requires installation of the landfill gas control system sufficient to draw landfill gas toward the gas collection devices without overdraw that would adversely affect the system. Sample probes shall be installed at the perimeter of the landfill to monitor off-site migration. Sufficient landfill gas shall be collected to prevent the average concentration of total organic compounds over a certain area on the surface of the landfill from exceeding 50 ppm. The concentration of organic compounds and any toxic air contaminants shall be determined when the landfill gas control system commences operation and periodically thereafter. Air samples at the perimeter of the landfill shall be analyzed to determine off-site migration. Results of such determination shall be reported to the Executive Officer on a quarterly basis. The maximum concentration of organic compounds as methane, measured at any point on the surface of the landfill, shall not exceed 500 ppm.

The rule requires determination of efficiencies of the disposal system of the collected landfill gas. Such efficiencies shall be measured when the landfill gas control system commences operation and periodically thereafter. Mitigation measures shall be implemented as necessary during installation of the system to ensure no public nuisance. Mitigation measures and all methods of measurements and evaluations are to be approved by the Executive Officer.

A compliance schedule is provided as a guide to achieve compliance by January 1, 1989. The owner/operator shall apply for a permit to construct and a permit to operate any expansion or modification to the landfill gas control system not covered by the approved plan, prior to beginning the expansion or modification.

All active landfills, except those described in paragraph (g) of this rule, require a gas control system. Any exemption from the requirement shall be reviewed periodically.

(b) Definitions

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

1. Landfill is a site used for the final land disposal of waste in accordance with applicable waste management plans and policies, in which refuse is spread, compacted, and covered with earth, and where the organic portion of such waste is subject to natural processes of aerobic and anaerobic decomposition.
2. An Active Landfill is a landfill that is currently receiving or has been receiving waste on or after January 1, 1982. This includes all portions of the landfill where waste is being deposited or has been deposited.
3. Landfill Gas is any untreated, raw gas derived through a natural process from the decomposition of organic waste deposited in a landfill or from the evolution of volatile species in the waste.
4. Toxic Air Contaminant is an air contaminant which has been identified as a hazardous air pollutant pursuant to Section 7412 of Title 42 of the United States Code; or has been identified as a toxic air contaminant by the Air Resources Board pursuant to Health and Safety Code Section 39655 through 39662, or which may cause or contribute to an increase in mortality or an increase in serious illness, or potential hazard to human health.
5. Perimeter is the outer boundary of the entire waste disposal property.

(c) Requirements

The owner/operator of an active landfill shall:

1. Install and maintain in good operating condition a landfill gas control system approved by the Executive Officer, which is designed to be of sufficient capacity to draw landfill gas toward the gas collection devices without overdraw that could cause excessive aerobic decomposition, or fires, or damaging effect on landfill gas disposal systems.
2. Install the landfill gas control system according to a design and in a manner approved by the Executive Officer. Such system shall be extended as necessary to prevent off-site migration. The landfill gas control system shall provide for gas recovery accordingly as the landfill is expanded in order to maintain compliance with this rule.
3. Install sampling probes at the perimeter of the landfill to determine whether off-site migration exists. A plan for such installation shall be submitted for approval together with the compliance plan.
4. Analyze the following samples to determine the concentrations of total organic compounds and any toxic air contaminants, following installation of the landfill gas control system and each month or greater interval thereafter, as specified by the Executive Officer, to assure continued compliance. The sampling plan and methods of analysis shall be approved by the Executive Officer prior to sampling and modified thereafter as necessary. The results of the analyses shall be reported to the Executive Officer on a quarterly basis in the form and manner prescribed by him. Such report shall be due within 45 days of the last day of the reporting period,

   (A) Integrated air sample on the surface of the landfill, over an area determined to be representative by the Executive Officer on a site-by-site basis.

   (B) Landfill gas collected by the gas control system.

   (C) Landfill gas from the sampling probes specified in subparagraph (c)(3).

   (D) Air at the perimeter of the landfill.

5. Collect sufficient landfill gas with the landfill gas control system to prevent the concentration of total organic compounds in the sample specified in subparagraph (c)(4)(A) from exceeding 50 ppm.
6. Not allow the maximum concentration of organic compounds from exceeding 500 ppm measured as methane at any point on the surface of the landfill.
7. Dispose all landfill gas collected by any of the following methods which have been demonstrated to the satisfaction of the Executive Officer to achieve the maximum possible efficiency:

   (A) Combustion.

   (B) Gas treatment and subsequent sale.

   (C) Sale and processing off-site.

   (D) Other equivalent methods.

8. Evaluate the efficiency of the combustion equipment or the gas treating facility as the system commences operation and annually thereafter. Such evaluation shall be made in a manner approved by the Executive Officer, recorded and maintained for at least two (2) years, and available to the District for inspection.
9. Take approved mitigation measures during installation of the landfill gas control system to prevent public nuisance.
10. Not recommence operations of a previously closed landfill, or commence operations of a newly established landfill, without an approved plan to comply with the requirements of this rule.
11. Submit to the Executive Officer a plan to comply with the requirements of this rule. Such plan shall include but not be limited to:

    (A) The means to meet the compliance schedule.

(B) The installation procedures and location of sampling probes.

(C) Sampling and test methods.

(D) Mitigation measures to be taken during installation of landfill gas control system.

(E) Mitigation measures to be taken when excessive concentrations are determined.

(F) Determination of efficiency specified in subsection (c)(8).

If after the installation of the landfill gas control system in accordance with the approved plan and the provisions of the permit to construct, the Executive Officer determines that in spite of all reasonable efforts by the owner/operator, the limits cannot be attained, he may specify other attainable limits.

(d) Compliance Schedule

1. The owner/operator of an active landfill shall meet the following compliance schedule.

   (A) On or before October 1, 1985.

   (i) Comply with the requirements in subsection (c)(6).

   (ii) Submit a compliance plan specified in subsection (c)(11).

   (B) Increments of progress:

   (i) On or before April 1, 1986.

   File an application with the District for a permit to construct and permit to operate a landfill gas control system.

   (ii) Within 6 months of the permit approval, award contract(s) for installation of the landfill gas control system.

   (iii) Within 12 months of the permit approval, begin installation.

   (iv) Within 24 months of the permit approval, complete installation.

   (v) January 1, 1989.

   Attain final compliance with this rule.

2. The owner/operator of an active landfill shall apply for a permit to construct and permit to operate any expansion or modification to the landfill gas control system prior to the installation of such expansion or modification, unless said expansion or modifications is covered by the plan previously submitted and approved by the Executive Officer.

(e) Fees

The owner/operator of an active landfill shall be assessed applicable filing and evaluation fees pursuant to Rules 301, 301.1, 304, and 306.

(f) Applicability of Other Rules

Compliance with the provisions of this rule does not exempt a person from complying with the requirements of Section

41700 of the California Health and Safety Code, Rules 401 (Visible Emissions), 402 (Nuisance), 403 (Fugitive Dust), 1150 (Excavation of Landfill Sties) of the District's Rules and Regulations, or any other applicable law, statute, code, ordinance, rule, or regulation.

(g) Exemptions

A landfill may be exempt from all or any portion of the requirements of this rule if the owner/operator can demonstrate to the satisfaction of the Executive Officer that due to the size, nature and age of the refuse, projected gas generation, or remoteness of the facility, there will be no adverse impact on air quality.

Such exemption shall be reviewed periodically by the District, to consider the development of the operations and gaseous emissions, and the impact of such development on the public. Depending upon the results of the review, the Executive Officer may extend or terminate the exemption.

(h) Severability of Portions of the Rule

If any portion of this rule is found to be invalid or unenforceable, such finding shall have no effect on the validity and enforceability of the remaining portions of the rule, which are severable and shall continue to be in full force and effect.

(i) Summary Paragraph Intended Only as a Guide

Paragraph (a) of this rule is intended only to summarize and give guidance in the interpretation. The provisions of paragraph (a) are not separate or distinct requirements, and if found to conflict with a provision of any other paragraph of this rule, shall yield to the provision in the other paragraph.

RULE 1150.2
CONTROL OF GASEOUS EMISSIONS FROM INACTIVE LANDFILLS

(Adopted October 18, 1985)

(a) Summary

The purpose of this rule is to reduce gaseous emissions from inactive landfills to prevent public nuisance and possible detriment to public health caused by exposure to such emissions. Based on the established criteria and from the available information, the District will determine whether the gas generated from the landfill needs to be collected. If so, the owner shall install a landfill gas control system approved by the Executive Officer.

The rule requires installation of the landfill gas control system sufficient to draw landfill gas toward the gas collection devices without overdraw that would adversely affect the system. Sample probes shall be installed at the perimeter of the landfill to monitor off-site migration. Sufficient landfill gas shall be collected to prevent the average concentration of total organic compounds over a certain area on the surface of the landfill from exceeding 50 ppm. The concentration of total organic compounds, and any toxic air contaminants shall be determined when the landfill gas control system commences operation and periodically thereafter. Air samples at the perimeter of the landfill shall be analyzed to determine off-site migration. Results from such determination shall be reported to the Executive Officer. The maximum concentration of organic compounds as methane, measured at any point on the surface of the landfill, shall not exceed 500 ppm.

The rule also requires the proper disposal of collected gas. The efficiency of the gas disposal system shall be determined when the landfill gas control system commences operation and periodically thereafter. Mitigation measures shall be implemented as necessary during the installation of the system to prevent public nuisance. Mitigation measures and methods of determination shall be approved by the Executive Officer.

(b) Definitions

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

1. An Inactive Landfill is a site where refuse had been disposed of on or before January 1, 1982, and no more subsequent refuse disposal activity had been conducted within the site.
2. Landfill Gas is any untreated raw gas derived through a natural process from the decomposition of organic waste deposited in a landfill or the evolution of volatile species in the waste.
3. Toxic Air Contaminant is an air contaminant which has been identified as a hazardous air pollutant pursuant to Section 7412 of Title 42 of the United States Code; or has been identified as a toxic air contaminant by the Air Resources Board pursuant to Health and Safety Code Section 39655 through 39662; or which may cause or contribute to an increase in mortality or an increase in serious illness, or potential hazard to human health.
4. Perimeter is the outer boundary of the entire waste disposal property.
5. Owner is a person whose name appears in the title of the property.

(c) Requirements

1. At any time after the adoption of this rule, but not later than 30 days after the receipt of a request, the owner shall submit to the Executive Officer preliminary information necessary to determine if further screening of the inactive

landfill is necessary.

2. Within 90 days of the date of a second request, the owner of an inactive landfill shall submit to the Executive Officer additional information, as may be necessary to determine whether or not landfill gas control systems and/or gas monitoring systems are required to be installed in the landfill.
3. If the owner needs additional time to provide the information required in subparagraphs (c)(1) and (c)(2), he/she shall request an extension in writing from the Executive Officer, indicating the amount of time that is adequate and reasonable to obtain such information. Such request for extension shall be submitted to the Executive Officer within 30 days of the receipt of the Executive Officer's requests as specified in subparagraph (c)(1) and (c)(2).
4. The Executive Officer shall present to the Board the screening criteria used to determine the need for controls under subparagraph (c)(5). No notifications will be made for controls prior to approval of these criteria by the Board.
5. Upon notification by the Executive Officer that landfill gas control systems and/or gas monitoring systems are required, the owner of an inactive landfill shall:

   (A) Install and maintain in good operating condition a landfill gas control system according to the design approved by the Executive Officer, which is sufficient to draw landfill toward the gas collection devices without overdraw that could cause excessive aerobic decomposition, fires, or damaging effect on the gas disposal system. Such system shall be extended as necessary to draw landfill gas to prevent off-site migration.

   (B) Install and maintain sampling probes at the perimeter of the landfill to determine if off-site migration exists. A plan for such installation shall be submitted to the Executive Officer for approval as part of the compliance plan.

   (C) Analyze the samples identified below for the concentrations of total organic compounds and any toxic air contaminants following installation of the landfill gas control system, and once a month or at greater intervals thereafter, as required by the Executive Officer. The sampling plan and methods of collection and analysis shall be reported to the Executive Officer as required and in the form and manner prescribed by him.

      (i) Integrated air sample on the surface of the landfill over an area determined by the Executive Officer to be representative on a site-by-site basis.

      (ii) Landfill gas collected by the gas control system.

      (iii) Landfill gas from the sampling probes specified in subparagraph (c)(5)(B).

      (iv) Air at the perimeter of the landfill.

   (D) Collect sufficient landfill gas with the landfill gas control system to prevent the concentration of total organic compounds in the sample specified in subparagraph (c)(5)(C)(i) from exceeding 50 ppm.

   (E) Not allow the maximum concentration of total organic compounds from exceeding 500 ppm measured as methane at any point on the surface of the landfill.

   (F) Dispose of ROG and toxic compounds in the landfill gas by any of the following processes which have been demonstrated to the satisfaction of the Executive Officer to achieve the maximum possible efficiency:

      (i) Combustion.

      (ii) Gas treatment and subsequent sale.

      (iii) Sale and processing off-site.

      (iv) Other equivalent methods.

   (G) Evaluate the efficiency of the combustion or the gas treating equipment when the system commences operation and annually thereafter. The evaluation shall be made in a manner approved by the Executive Officer,

recorded, and maintained for at least two (2) years, and be available to the District for inspection.

(H) Take approved mitigation measures during installation of the landfill gas control system to prevent public nuisance.

(I) Submit to the Executive Officer a plan to comply with the requirements of this rule. Such plan shall include but not be limited to:

(i) The means to meet the compliance schedule.

(ii) The installation procedures and location of sampling probes.

(iii) Sampling and test methods.

(iv) Mitigation measures to be taken during the installation of landfill gas control system.

(v) Mitigation measures to be taken when excessive concentrations are determined.

If after the installation of the landfill gas control system in accordance with the approved plan and the provisions of the permit to construct, the Executive Officer determines that in spite of all reasonable efforts by the owner, the limits cannot be attained, he may specify other attainable limits.

(d) Compliance Schedule

The owner of an inactive landfill shall meet the following compliance schedule:

1. From the date of notification from the Executive Officer that a landfill gas control system is required:

   (A) Within 6 months submit a compliance plan specified in subparagraph (c)(5)(I).

   (B) Within 12 months file an application with the District for a permit to construct and permit to operate a landfill gas control system.

2. From the date the permit to construct is issued:

   (A) Within 6 months, award contract(s) for installation for the landfill gas control system.

   (B) Within 12 months, begin installation.

   (C) Within 24 months, complete installation

   (D) Within 27 months, attain compliance with this rule.

(e) Fees

The owner of an inactive landfill shall be assessed applicable filing and evaluation fees pursuant to Rules 301, 301.1, 304, and 306.

(f) Applicability of Other Rules

Compliance with the provisions of this rule does not exempt a person from complying with the requirements of Section 41700 of the California Health and Safety Code, Rules 401 (Visible Emissions), 402 (Nuisance), 403 (Fugitive Dust), 1150 (Excavation of Landfill Sites) of the District's Rules and Regulations, or any other applicable law, statute, code, ordinance, rule, or regulation.

(g) Exemptions

A landfill may be exempt for all or any portion of the requirements of this rule if the owner can demonstrate to the satisfaction of the Executive Officer that due to the size, nature and age of the refuse, projected gas generation, or remoteness of the facility, there will be no adverse impact on air quality. Such exemption may be determined upon evaluation of the information obtained under the provisions of subparagraph (c)(1) or (c)(2) of this rule in accordance with the established screening criteria.

The exemption may be reviewed periodically by the Executive Officer to consider the development of the landfill surface and/or nearby property and the impact of such development on the public. Depending upon the results of the review, the Executive Officer may extend or terminate the exemption.

(h) Summary Paragraph Intended Only as a Guide

Paragraph (a) of this rule is intended only to summarize and give guidance in the interpretation and, if found to be in conflict with a provision of any other paragraph of this rule, shall yield to the provision in the other paragraph.

(**Adopted:** 07/08/88; **Amended**: 05/05/89; **Amended**: 03/02/90; **Amended**: 06/28/90; **Amended**: 11/02/90; **Amended**: 12/07/90; **Amended**: 08/02/91; **Amended**: 09/06/91; **Amended**: 12/09/94; **Amended**: 03/08/96; **Amended**: 06/13/97; **Amended**: 07/20/99; **Amended**: 06/19/12)

Rule 1151
Motor Vehicle and Mobile Equipment Coating Operations

(A) General

(1) Purpose

(a) The purpose of this rule is to reduce emissions of Volatile Organic Compounds (VOCs), from Coatings and solvents associated with the Refinishing of Motor Vehicles, Mobile Equipment and their Associated Parts and Components.

(2) Applicability

(a) This rule is applicable to:

(i) Any Person who uses, applies, or, solicits the use or application of any Automotive Coating or associated solvent within the District.
(ii) Any Person who supplies, sells, offers for sale, manufactures, or distributes any Automotive Coating or associated solvent for use within the District.

(b) This rule does not apply to:

(i) Any Coating applied to Motor Vehicles or Mobile Equipment, or their Associated Parts and Components, during manufacture on an Assembly Line.
(ii) Any Automotive Coating or associated solvent that is offered for sale, sold or manufactured for use outside of the District or for shipment to other manufacturers for reformulation or repackaging.
(iii) Any Stencil Coating Product.
(iv) Any Aerosol Coating Products that are in compliance with regulations and requirements adopted by the California Air Resources Board (CCR, Title 17, Subchapter 8.5, Section 94522).
(v) Any Automotive Coating that is sold, supplied, or offered for sale in one-half (0.5) fluid ounce or smaller containers intended to be used by the general public to repair tiny surface imperfections.

(B) Definitions

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

(1) "Adhesion Promoter" - A Coating which is labeled and formulated to be applied to uncoated plastic surfaces to facilitate bonding of subsequent Coatings, and on which, a subsequent Coating is applied.

(2) "Aerosol Coating Product" - A pressurized Coating product containing pigments or resins that dispenses product ingredients by means of a propellant, and is packaged in a disposable can for hand-held application, or for use in specialized equipment for ground traffic/marking applications.

(3) "Air Pollution Control Officer (APCO)" - The person appointed by the Air Pollution Control Board and assigned full time to manage and direct the business and operations of the district. The Air Pollution Control Officer is also the District Director, and is that person described for State purposes as the Air Pollution Control Officer.

(4) "Alternative Emission Control Plan" - A plan which allows a source to demonstrate an alternative method of rule compliance.

(5) "Anti-Glare Safety Coating" - a Coating formulated to eliminate glare for safety purposes on interior surfaces of a vehicle and which shows a reflectance of 25 or less on a 60° gloss meter.

(6) "Assembly Line" - An arrangement of industrial equipment and workers in which the product passes from one specialized operation to another until complete by either automatic or manual means.

(7) "Associated Parts and Components" - Structures, devices, pieces, modules, sections, assemblies, subassemblies, or elements of Motor Vehicles or Mobile Equipment that are designed to be part of Motor Vehicles or Mobile Equipment but which are not attached to Motor Vehicles or Mobile Equipment at the time of coating the structure, device, piece, module, section, assembly, subassembly, or element. The Associated Parts and Components definition does not include circuit boards.

(8) "ASTM" - American Society for Testing and Materials

(9) "Automotive Coating" - Any coating or Automotive Coating Component, used or recommended for use, in Motor Vehicle or Mobile Equipment Refinishing, service, maintenance, repair, restoration, or modification, except metal plating activities. Any reference to automotive Refinishing or Automotive Coating made by a Person, on the container, or in product literature constitutes a recommendation for use in Motor Vehicle or Mobile Equipment Refinishing.

(10) "Automotive Coating Component" - Any portion of a coating, including, but not limited to, a Reducer or thinner, toner, hardener, and Additive, which is recommended by any person to distributors or end-users, for use in an Automotive Coating, or which is supplied for or used in an Automotive Coating. The raw materials used to produce the components are not considered Automotive Coating Components.

(11) "Automotive Refinishing Facility" - Any shop, business, location, or parcel of land where Motor Vehicles or Mobile Equipment or their Associated Parts and Components are coated, including autobody collision repair shops. Automotive Refinishing Facility does not include the original equipment manufacturing plant where the Motor Vehicle or Mobile Equipment is completely assembled.

(12) "Bright Metal Trim Repair Coating" - A Coating applied directly to chrome-plated metal surfaces for the purpose of appearance.

(13) "Bus" - Any Motor Vehicle having a manufacturer's gross vehicle weight of more than 8600 pounds and which is designed primarily for the transportation of persons, and having a design capacity of over 12 persons.

(14) "CARB" - California Air Resources Board

(15) "CFR" - Code of Federal Regulations

(16) "Cleaning Operations" - The removal of loosely held uncured adhesives, inks, Coatings, or contaminants, including, but not limited to, dirt, soil, or grease, from Motor Vehicles, Mobile Equipment, Associated Parts and Components, substrates, parts, products, tools, machinery, equipment, or general work areas.

(17) "Clear Coating" - Any coating that contains no pigments and is labeled and formulated for application over a Color Coating or Clear Coating.

(18) "Coating" - A material which is applied to a surface and which forms a film in order to beautify and/or protect such surface.

(19) "Coating Categories" - The table below shows Coating Categories prior to the 05/01/2013 compliance deadline, and the corresponding Coating Categories after the 05/01/2013 compliance deadline:

Comparison of Coating Categories	
Coating Categories Prior to 05/01/2013	**Coating Categories 05/01/13 and After**
Adhesion Promoter	Adhesion Promoter
Anti-glare Safety Coating	Clear Coating, Color Coating, or Single-Stage Coating
Bright Metal Trim Repair Coating	Any Other Coating Type
Camouflage	Color Coating
Elastomeric Materials	Primer, Color Coating, Clear Coating, Single-stage Coating, or Underbody Coating
General Topcoat	Single-Stage Coating
Gloss Flatteners (aka Low-Gloss Coatings)	Clear Coating
Heat Resistant	Primer, Color Coating, Clear Coating, or Single-stage Coating
Impact Resistant Coating	Single-Stage Coating, Clear Coating, Underbody Coating, or Truck Bed Liner Coating
Jambing	Clear Coating
Metallic/Iridescent Topcoat	Single-Stage Coating
Multi-Color Coatings	Multi-Color Coating
Multi-Color Multi-Stage	Multi-Color Coating
Multi-Color Stage System	Color Coating & Clear Coating
Multi-Color Topcoat	Multi-Color Coating
Precoat	Primer
Pretreatment Wash Primer	Pretreatment Coating
Primer	Primer
Primer Sealer	Primer Sealer
Primer Surfacer	Primer
Rubberized Asphaltic Underbody	Underbody Coating
Single-Stage Metallic/Iridescent Coating	Single-Stage Coating
Single-Stage Nonmetallic/Noniridescent Topcoat	Single-Stage Coating
Solid Color Topcoat	Single-Stage Coating
Specialty Coatings	This generic category has been eliminated an replaced with specific categories for the various coatings previous grouped together
Temporary Protective Coating	Temporary Protective Coating
Topcoats	Single-Stage Coating

Uniform Finish Blenders	Uniform Finish Coating
Water Hold-Out Coating	Primer
Weld-Thru Coatings	Primer

(20) "Color Coating" - Any pigmented Coating, excluding Adhesion Promoters, Primers, and Multi-color Coatings, that requires a subsequent Clear Coating and which is applied over a Primer, Adhesion Promoter, or Color Coating. Color Coatings include metallic/iridescent Color Coatings.

(21) "Elastomeric Materials" - Coatings which are specifically formulated and applied over coated or uncoated flexible plastic substrates for the purpose of adhesion.

(22) "Electrostatic Spray Application" - A method of applying Coatings whereby the atomized Coating droplets are charged and subsequently deposited on the substrate by electrostatic attraction.

(23) "Emission Control System" - Any combination of capture systems and control devices used to reduce VOC emissions from Automotive Coating operations.

(24) "Exempt Compounds" - Those compounds listed in 40 CFR 51.100(s).

(25) "Finish" - The Coating of incomplete vehicles, their parts and components, or Mobile Equipment for which the original Coating was not applied from an Original Equipment Manufacturer (OEM) plant Coating Assembly Line.

(26) "Grams of VOC per Liter of Coating Less Water and Less Exempt Compounds (VOC Content)" - The weight of VOC per combined volume of VOC and Coating solids and shall be calculated by the following equation:

$$G_{VOC\,/\,LoC} = \frac{W_S - W_W - W_{ES}}{V_M - V_W - V_{ES}}$$

Where:

$G_{VOC/LoC}$ = Grams VOC/L of Coating Less Water and Exempt
W_S = weight of volatile compounds in grams
W_W = weight of water in grams
W_{ES} = weight of Exempt Compounds in grams
V_M = volume of material in liters
V_W = volume of water in liters
V_{ES} = volume of Exempt Compounds in liters

(27) "Grams of VOC per Liter of Material" - The weight of VOC per volume of material as calculated by the following equation:

$$G_{VOC/LoM} = \frac{W_S - W_W - W_{ES}}{V_M}$$

Where:

$G_{VOC/LoM}$ = Grams VOC/L of Material
W_S = weight of volatile compounds in grams
W_W = weight of water in grams
W_{ES} = weight of exempt compounds in grams
V_M = volume of material in liters

(28) "Group II Exempt Compounds" - Compounds that are restricted because they are either toxic, potentially toxic, upper-atmosphere ozone depleters, or cause other environmental impacts. These compounds are listed as follows:

methylene chloride (dichloromethane)
1,1,1-trichloroethane (methyl chloroform)
Trichlorofluoromethane (CFC-11)
dichlorodifluoromethane (CFC-12)
1,1,2-trichloro-1,2,2-trifluoroethane (CFC-113)
1,2-dichloro-1,1,2,2-tetrafluoroethane (CFC-114)
chloropentafluoroethane (CFC-115)
cyclic, branched, or linear, completely methylated siloxanes
tetrachloroethylene (perchloroethylene)

(29) "High-Volume, Low-Pressure (HVLP) Spray" - Equipment Permanently Labeled as such used to apply Coatings by means of a spray gun which is designed to be operated and which is operated between 0.1 and 10 pounds per square inch gauge (psig) air pressure measured dynamically at the center of the air cap and at the air horns.

(30) "Impact Resistant Coating" - Any Coating applied to a rocker panel for the purpose of chip resistance to road debris.

(31) "Metallic/Iridescent Color Coating" - Any Coating which contains iridescent particles, composed of either metal as metallic particles or silicon as mica particles, in excess of five (5) grams per liter (0.042 pounds per gallon) as applied, where such particles are visible in the dried film.

(32) "Mobile Equipment" - Any device which may be drawn or is capable of being driven on a Roadway or rails, including but not limited to, trains, railcars, truck bodies, truck trailers, utility bodies, camper shells, mobile cranes, bulldozers, street cleaners, and implements of husbandry or agriculture.

(33) "Motor Vehicle" - a vehicle which is self-propelled, including, but not limited to cars, trucks, Buses, golf carts, vans, Motorcycles, tanks, and armored personnel carriers.

(34) "Motorcycle" - any Motor Vehicle other than a tractor having a seat or saddle for the use of the rider and designed to travel on not more than three wheels in contact with the ground and weighing less than 1500 pounds, except that four wheels may be in contact with the ground when two of the wheels are a functional part of a sidecar.

(35) "Multi-Color Coating" - Any Coating that exhibits more than one color in the dried film after a single application, is packaged in a single container, and hides surface defects on areas of heavy use, and which is applied over a Primer or Adhesion Promoter.

(36) "Multi-Colored Multistage Topcoat System" - A Basecoat/Clearcoat Topcoat System in which the basecoat portion is a Multi-Colored Topcoat.

(37) "Multi-Colored Topcoat" - a Coating which exhibits more than one color when applied, and which is packaged in a single container and applied in a single coat.

(38) "Multistage Topcoat System" - Any Basecoat/Clearcoat Topcoat System or any Three-Stage Topcoat System, manufactured as a system, and used as specified by the manufacturer.

(39) "Passenger Car" - any Motor Vehicle designed primarily for transportation of persons and having a design capacity of 12 persons or less.

(40) "Person" - Shall have the same meaning as defined in the California Health and Safety Code §39047.

(41) "Permanently Labeled" - Permanent labeling is in the form of an engraving or a plate permanently attached to the equipment.

(42) "Pretreatment Coating" - A Coating which contains no more than sixteen (16) percent solids, by weight, and at least one-half (0.5) percent acid, by weight, is used to provide surface etching, and is applied directly to bare metal surfaces to provide corrosion resistance and promote adhesion for subsequent Coatings.

(43) "Primer" - Any Coating which is labeled and formulated for application to a substrate to provide 1) a bond between the substrate and subsequent coats, 2) corrosion resistance, 3) a smooth substrate surface, or 4) resistance to penetration of subsequent coats, and on which a subsequent Coating is applied. Primers may be pigmented.

(44) "Primer Sealer" - Any Coating which is labeled and formulated for application prior to the application of a Color Coating for the purpose of color uniformity, or

to promote the ability of an underlying Coating to resist penetration by the Color Coating.

(45) "Primer Surfacer" - A Coating applied for the purpose of corrosion resistance or adhesion, and which promotes a uniform surface by filling in surface imperfections.

(46) "Reducer" - Any volatile liquid used to reduce the viscosity of the Coating, but not used for Cleaning Operations. This liquid may be solvents, diluents, or both, and may also be referred to as a thinner.

(47) "Refinishing" - Any Coating of Motor Vehicles, their Associated Parts and Components, or Mobile Equipment, including partial body collision repairs, for the purpose of protection or beautification and which is subsequent to the original Coating applied at an Original Equipment Manufacturing (OEM) plant Coating Assembly Line.

(48) "Roadway" - A way or place used for purposes of vehicular travel.

(49) "Rocker Panel" - The panel area of a Motor Vehicle which is no more than ten inches from the bottom of a door, quarter panel or fender.

(50) "Rubberized Asphaltic Underbody Coating" - A Coating applied to wheel wells, the inside of door panels or fenders, the underside of a trunk or hood, or the underside of the Motor Vehicle itself, for the purpose of sound deadening or protection.

(51) "Single-Stage Coating" – Any pigmented coating, excluding Primers and Multi-Color coatings, labeled and formulated for application without a subsequent clear coat. Single-stage coatings include single-stage metallic/iridescent Coatings.

(52) "Solvent Cleaning Operations" - The removal of loosely held uncured adhesives, uncured inks, uncured Coatings, and contaminants which include, but are not limited to, dirt, soil, and grease from parts, products, tools, machinery, equipment, and general work areas. Each distinct method of cleaning in a cleaning process which consists of a series of cleaning methods shall constitute a separate Solvent Cleaning Operation.

(53) "Specialty Coating" - Any of the following Coatings: Adhesion Promoters, Uniform Finish Blenders, Elastomeric Materials, Anti-Glare Safety Coatings, Impact Resistant Coatings, Rubberized Asphaltic Underbody Coatings, Water Hold-Out Coatings, Weld-Thru Coatings, and Bright Metal Trim Repair Coatings.

(54) "Spot Repair" - Repair of an area on a motor vehicle, piece or mobile equipment, or associated parts or components of less than an entire panel.

(56) "Stencil Coating" - An ink or a pigmented Coating which is rolled or brushed onto a template or a stamp in order to add identifying letters, symbols, and/or numbers to Motor Vehicles, Mobile Equipment, or their parts and components.

(57) "Targeted HAP Compounds"- The Hazardous Air Pollutant (HAP) compounds of chromium (Cr), lead (Pb), manganese (Mn), nickel (Ni), or cadmium (Cd) targeted by 40 CFR 63 Subpart HHHHHH – National Emission Standards for Hazardous Air Pollutants: Paint Stripping and Miscellaneous Surface Coating Operations at Area Sources.

(58) "Temporary Protective Coatings" - Any Coating which is labeled and formulated for the purpose of temporarily protecting areas form overspray or mechanical damage.

(59) "Topcoat" – Any Coating applied over a Primer, Primer System or an original OEM Finish for the purpose of appearance, identification, or protection.

(60) "Transfer Efficiency" - The ratio of the weight of Coating solids deposited on an object to the total weight of Coating solids used in a Coating application step, expressed as a percentage.

(61) "Truck" - A Motor Vehicle designed, used, or maintained primarily for the transportation of property.

(a) "Large-Sized Truck" - A Truck having a manufacturer's gross vehicle weight rating of more than 8600 pounds.

(b) "Medium-Sized Truck" - A Truck having a manufacturer's gross vehicle weight of 6001 to 8600 pounds.

(c) "Small-Sized Truck" - Any Motor Vehicle having a manufacturer's gross vehicle weight rating at 6000 pounds or less and which is designed primarily for the purposes of transportation of property or is a derivative of such vehicle, or is available with special features enabling on-street or off-highway operation and use.

(62) "Truck Bed Liner Coating" - Any Coating, excluding Clear, Color, Multi-color, and Single-stage Coatings, labeled and formulated for application to a truck bed to protect it from surface abrasion.

(63) "Underbody Coating" - Any Coating labeled and formulated for application to wheel wells, the inside of door panels or fenders, the underside of a trunk or hood, or the underside of the motor vehicle.

(64) "Uniform Finish Blenders" - Any Coating labeled and formulated for application to the area around a Spot Repairs for the purpose of blending a repaired area's color or clear coat to match the appearance of an adjacent area's existing Coating.

On and after 05/01/13 this Coating Category will be referred to as Uniform Finish Coating.

(65) "Uniform Finish Coating"- Any Coating labeled and formulated for application to the area around a Spot Repair for the purpose of blending a repaired area's color or clear coat to match the appearance of an adjacent area's existing Coating. Prior to 05/01/13 this Coating Category may be referred to as Uniform Finish Blenders.

(66) "Van" - a closed Truck for carrying property or persons.

(a) "Medium-Sized Van" - A Van having a manufacturer's gross vehicle weight rating of 6001 to 8600 pounds.

(b) "Small-Sized Van" - A Van having a manufacturer's gross vehicle weight rating at 6000 pounds or less and which is designed primarily for purposes of transportation of property and/or persons.

(67) "Vehicle" - a device by which any person or property may be propelled, moved, or drawn upon a Roadway, excepting a device moved exclusively by human power or used exclusively upon stationary rails or tracks.

(68) "VOC Actual" - This definition is the same as the definition of Grams of VOC per Liter of Material as listed under subsection (B)(27).

(69) "VOC Regulatory" - This definition is the same as the definition of Grams of VOC per Liter of Coating Less Water and Less Exempt Compounds as listed under subsection (B)(26).

(70) "Volatile Organic Compound (VOC)" - Any volatile compound containing the element carbon, excluding methane, carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates, ammonium carbonate, and Exempt Compounds.

(71) "Water Hold-Out Coating" - A Coating applied to the interior cavity areas of doors, quarter-panels and rocker panels for the purpose of corrosion resistance to prolonged water exposure.

(72) "Weld-Thru Coating" - A Coating applied to metal immediately prior to welding to provide corrosion resistance.

(C) Requirements

(1) VOC Content of Coatings

(a) Effective on the dates specified, a person shall not apply Coating to a Motor Vehicle, Mobile Equipment, or Associated Parts or Components, that has a VOC content in excess of the limits contained in Table 1 and Table 2 of this subsection except as provided in Section (C)(3)(a) or (b).

Table 1 - Coating Categories and VOC Limits

	VOC Regulatory Limit, as applied, in grams per Liter (pounds per gallon)
Coating Categories	**Effective on and after 05/01/13**
Adhesion Promoter	540 (4.5)
Clear Coating	250 (2.1)
Color Coating	420 (3.5)
Multi-color Coating	680 (5.7)
Pretreatment Coating	660 (5.5)
Primer	250 (2.1)
Primer Sealer	250 (2.1)
Single-stage Coating	340 (2.8)
Temporary Protective Coating	60 (0.5)
Truck Bed Liner Coating	310 (2.6)
Underbody Coating	430 (3.6)
Uniform Finish Coating	540 (4.5)
Any Other Coating Type	250 (2.1)

Table 2 - Coating Categories and VOC Limits

Coating Categories	VOC Regulatory Limit, as applied, in grams per Liter (pounds per gallon)	
	Group 1* Vehicles prior to 05/01/13	**Group 2** vehicles prior to 05/01/13**
Pretreatment Wash Primer	780 (6.5)	780 (6.5)
Primer/Primer Surfacer/ Primer Sealer	250 (2.1)	250 (2.1)
Primer Sealer	250 (2.1)	340 (2.8)
Topcoat		
General	340 (2.8)	420 (3.5)
Metallic/Iridescent	340 (2.8)	420 (3.5)
Multi-Colored	680 (5.7)	680 (5.7)
Multistage	340 (2.8)	420 (3.5)
Specialty Coatings	840 (7.0)	840 (7.0)

*Group 1 Vehicles are public transit buses and mobile equipment including but not limited to: truck bodies, truck trailers, utility bodies, camper shells, mobile cranes, bulldozers, street cleaners, golf carts, and implements of husbandry, where color match is not required.

**Group 2 Vehicles are passenger cars; large/heavy duty truck cabs and chassis with a manufacturer's gross vehicle weight over 10,000 pounds; light and medium duty trucks and vans having a manufacturer's gross vehicle weight rating of 10,000 pounds or less; and motorcycles; and Group 1 Vehicles where color match is required.

(b) Compliance with the VOC limits shall be based on VOC Content, including any VOC material added to the original coating supplied by the manufacturer, less water and Exempt Compounds, as applied to the Motor Vehicle, Mobile Equipment, or Associated Parts or Components (please, refer to subsection (B)(26) for the calculation of VOC Content).

(2) Most Restrictive VOC Limit

(a) If anywhere on the container of any Automotive Coating, or any label or sticker affixed to the container, or in any sales, advertising, or technical literature, any representation is made that indicates that the Coating meets the definition of, or is recommended for use of, more than one of the Coating categories listed in subsection (C)(1)(a) and (b), then the lowest applicable VOC content limit in Table 1 and Table 2 shall apply.

(3) Alternative Compliance

(a) Emission Control System

A person may comply with the provisions of section (C)(1) by using an approved Emission Control System consisting of collection and control devices, that is approved, in writing, by the APCO for reducing emissions of VOC. The APCO shall approve such Emission Control Systems only if the Emission Control System demonstrates a control efficiency of at least

85 percent. The required efficiency of an Emission Control System at which an equivalent or greater level of VOC emission reduction will be achieved shall be calculated by the following equation:

$$CE = \left[1 - \left\{ \frac{VOC_{LWc}}{VOC_{LWn,Max}} \times \frac{1 - \left(\frac{VOC_{LWn,Max}}{D_{n,Max}} \right)}{1 - \left(\frac{VOC_{LWc}}{D_c} \right)} \right\} \right] \times 100$$

Where:

CE = Control Efficiency, percent

VOC_{LWc} = VOC Limit of Rule 1116, less water and less Exempt Compounds, pursuant to Section C.1.

$VOC_{LWn,Max}$ = Maximum VOC content of non-compliant Automotive Coating used in conjunction with a control device, less water and Exempt Compounds.

$D_{n,Max}$ = Density of VOC solvent, Reducer, or thinner contained in the non-compliant Automotive Coating containing the maximum VOC.

D_c = Density of corresponding VOC solvent, Reducer, or thinner used in the compliant Automotive Coating system = 880g/L.

(b) Alternative Emission Control Plan

A person may comply with the provisions of paragraph (C)(1)(a) by means of an Alternative Emissions Control Plan, pursuant to Rule 108 – *Alternative Emissions Control Plans.*

(4) Prohibited Compounds

(a) A Person shall not manufacture, sell, offer for sale, distribute for use in the District, or apply any Automotive Coating which contains any Group II Exempt Compounds, as defined in subsection (B)(28).

(5) Carcinogenic Materials

(a) A person shall not manufacture Automotive Coatings in which cadmium or hexavalent chromium was introduced as a pigment or as an agent to impart any property or characteristic to the Coatings during manufacturing, distribution, or use of the applicable Coatings as defined by the *Air Toxic Control Measure (ATCM) for Emissions of Hexavalent*

Chromium and Cadmium from Motor Vehicle and Mobile Equipment Coatings, Title 17 CCR, section 93112.

(6) Application Methods

(a) Except for Underbody Coatings, graphic arts operations, Truck Bed Liner Coatings, or any Coating use of less than one (1.0) fluid ounce (29.6 milliliters), no person shall apply any Coating to Motor Vehicles or Mobile Equipment or their Associated Parts and Components unless by the use of one of the following methods:

(i) Brush, dip, or roller; or,

(ii) Electrostatic Application equipment, operated in accordance with the manufacturer's recommendations and in compliance with permit conditions; or,

(iii) High-Volume, Low-Pressure (HVLP) Spray, operated in accordance with the manufacturer's recommendations and in compliance with permit conditions; or,

a. No Person shall sell or offer for sale, for Automotive Refinishing use within the District, any HVLP spray gun without a permanent marking denoting the maximum inlet air pressure in pounds per square inch gauge (psig) at which the gun will operate within the parameters specified in Section (B)(29).

b. If an Automotive Refinishing gun is not Permanently Labeled, the operator must demonstrate that the gun meets the HVLP definition in Section (B)(29) in design and use. A satisfactory demonstration must be based on the manufacturer's published technical material on the design of the gun and by a demonstration of the operation for the gun using an air pressure tip gauge designed specifically for the gun in use.

(iv) Any other Coating application which has been demonstrated to the satisfaction of the APCO to be capable of achieving a Transfer Efficiency equivalent to, or higher than, the application methods listed in subsections (C)(6)(a)(i) and (C)(6)(a)(ii) above, but not less than 65 percent, as per subsections (G)(2)(e) and (G)(2)(k),and for which written approval of the APCO has been obtained.

(7) Surface Preparation and Cleaning Operations

(a) The requirements of this subsection shall apply to any Person using solvent for Surface Preparation and Cleaning Operations.

(i) Any Person shall not use an organic compound(s), or mixture thereof, (excluding Exempt Compounds) for Surface Preparation and Cleaning Operations with a VOC content in excess of twenty-five (25) grams per liter (0.21 pounds per gallon) of material.

a. Cleaning with aerosol solvent products shall not be subject to the provisions of subsection (C)(7)(a) if 160 fluid ounces or less of aerosol solvent products are used per day, per facility.

(ii) Any Person shall use closed, non-absorbent containers for the storage or disposal of any applicator (including brushes, swabs, cloth or paper) used for solvent Surface Preparation and Cleaning Operations.

(iii) Any Person shall store all Automotive Coatings, Coating components, and fresh or spent solvent in vapor tight and closed containers, except while adding or removing them from the containers.

(iv) Any Person shall not use organic compounds for the Cleaning Operations of spray equipment including paint liners unless an enclosed system is used for Cleaning Operations. The system shall enclose spray guns, cups, nozzles, bowls, and other parts during washing, rinsing and draining procedures. Equipment used shall minimize the evaporation of organic compounds to the atmosphere.

(b) Effective May 1, 2013, no Person shall possess at any Automotive Refinishing Facility, any solvent used for Surface Preparation and Cleaning Operations with a VOC content that does not comply with the requirements in subsection (C)(7)(a)(i).

(8) Prohibition of Possession, Specification and Sale

(a) No Person subject to this rule shall posses any Automotive Coating that is not in compliance with the requirements of subsection (C)(1), unless one or more of the following conditions apply:

(i) The Coating is located at a facility that utilizes an approved Emission Control System pursuant to subsection (C)(3)(a), and the Coating meets the limits specified in permit conditions.

(ii) The Coating is located at a facility that operates in compliance with an approved Alternative Emissions Control Plan pursuant to subsection (C)(3)(b), and the Coating is specified in the plan.

(iii) The Coating is located at a training center and the Coating is used for educational purposes, provided that the VOC emissions from Coatings not meeting VOC limits of section (C)(1) do not exceed twelve (12) pounds per day.

(iv) The Coating is located at a prototype Motor Vehicle manufacturing facility and the Coating is supplied by an assembly-line Motor Vehicle manufacturer for use in the Refinishing of a prototype Motor Vehicle, provided that the VOC emissions from Coatings not meeting the VOC limits of section (C)(1) do not exceed twenty-one (21) pounds per day and 930 pounds in any one calendar year.

(b) No person shall solicit from, or require any other Person to use, in the District any Automotive Coating or solvent which, when applied as supplied or thinned or reduced according to the manufacturer's recommendation for application, does not meet the:

(i) Applicable VOC limits required by subsection (C)(1) for that specific application unless:
  a. The Coating is located at a Automotive Refinishing Facility that utilizes an approved Emission Control System pursuant to subsection (C)(3)(a), and the Coating meets the limits specified in permit conditions.
  b. The Coating is specifically exempt pursuant to section (D) of this rule.

(ii) Applicable VOC limits for solvent for Surface Preparation and Cleanup Operations pursuant to section (C)(7).

(c) No Person shall manufacture, blend, supply, repackage for sale, offer for sale, sell, or distribute for use in the District any Automotive Coating which, when applied as supplied or thinned or reduced according to the manufacturer's recommendation for application, does not meet the:

(i) Applicable VOC limits required by subsection (C)(1) for the specific application, unless:
  a. The Coating is located at an Automotive Refinishing Facility that utilizes an approved Emission Control System pursuant to subsection (C)(3)(a), and the Coating meets the limits specified in permit conditions.
  b. The Coating is specifically exempt under section (D) of this rule.
  c. The Person that offers for sale or distributes the Coating keeps the following records for at least five (5) years and makes them available to the APCO upon request, the following information:
    1. Coating name and manufacturer;
    2. Application method;
    3. Automotive Coating Category and mix ratio specific to the Coating;
    4. VOC content of Coating;
    5. Documentation that the material is a Coating;
    6. Current manufacturer specification sheets, material safety data sheets (MSDS), technical data sheets, or air quality data sheets, which list the VOC content of each ready-to-spray Coating (based on the manufacturer's stated mix ratio), Automotive Coating Components, and VOC content of each solvent;

7. Purchase records identifying the Automotive Coating category, name, and volume of Coatings; and,
8. The name and address of the Person purchasing the Coating, a statement of the basis the purchase will comply with this paragraph, including if use is for outside the District, and acknowledgement by the purchaser that this statement is correct.

(ii) Requirements of subsections (C)(4) and (C)(5).

(d) No Person shall solicit from, require, offer for sale to, sell to, or distribute to any other Person for the use in the District any Automotive Coating application equipment that does not meet the requirements of subsection (C)(6).

(e) The requirements of subsections (C)(1), (C)(2), and (C)(3)shall apply to all written or oral agreements executed and entered into under the terms of which an Automotive Coating or a Coating application equipment shall be used at any location within the District.

(D) Exemptions

(1) The provisions of this rule shall not apply to:

(a) Any Coating applied to Motor Vehicle or Mobile Equipment, or their Associated Parts and Components, during manufacture on an Assembly Line.

(b) Any Automotive Coating that is offered for sale, sold, or manufactured for use outside of the District or for shipment to other manufacturers for reformulation or repackaging.

(c) Any Stencil Coating Product.

(d) Any Aerosol Coating Product.

(e) Any Automotive Coating that is sold, supplied, or offered for sale in one-half (0.5) fluid ounce or smaller containers.

(2) The prohibitions specified in subsections (C)(8) shall not apply to persons offering for sale to, selling to, distributing to, or requiring other persons who are operating an approved Emission Control System under subsection (C)(3)(a), or complying under subsection (C)(3)(b), or operating pursuant to subsection (D)(3).

(3) The requirements of subsection (C)(1)(a) shall not apply to Coatings applied for educational purposes at Coating training centers, which are owned and operated by Coating manufacturers, provided that the VOC emissions emitted at a Coating

training center from Coatings not complying with subsection (C)(1)(a) do not exceed twelve (12) pounds per day.

(4) The requirements of subsection (C)(1) shall not apply to Coatings located at a prototype Motor Vehicle manufacturing facility and the Coating is supplied by an assembly-line Motor Vehicle manufacturer for use in the Refinishing of a prototype Motor Vehicle, provided that the VOC emissions from Coatings not meeting the VOC limits of section (C)(1) do not exceed twenty-one (21) pounds per day and 930 pounds in any one calendar.

(5) Any facility or Person classified as exempt or claiming to be exempt under this section, (D), shall meet the record keeping requirements of this rule so as to be able to prove the exemption status.

(6) Rule 442 Applicability

(a) Any Coating, Coating operation, or facility which is exempt from all or a portion of the VOC limits of this rule shall comply with the provisions of Rule 442 if applicable.

(E) Administrative Requirements

(1) Manufacturer's Compliance Statement Requirement

(a) For each individual Automotive Coating, Automotive Coating Component, ready-to-spray mixture (based on the manufacturers stated mix ratio), and solvents the manufacturer and/or repackager shall include the following information on a product data sheet, or an equivalent medium:

(i) The VOC Actual and the VOC Regulatory for Coatings (in grams per liter).
(ii) The weight percentage of volatiles, water, and Exempt Compounds.
(iii) The volume percentage of water and Exempt Compounds.
(iv) The density of the material (in grams per liter).
(v) The weight percentage of all Targeted HAP Compounds.

(b) For each solvent used in Solvent Cleaning Operations, the manufacturer and/or repackager shall include the following information on a product data sheet, or an equivalent medium:

(i) The VOC Actual and the VOC Regulatory for Coatings (in grams per liter).

(2) Manufacturer's Labeling Requirements

(a) The manufacturer and/or repackager of Automobile Coatings or Automotive Coating Components shall include, on all containers, the applicable use Coating Category(ies), and the VOC Actual and the VOC Regulatory for Coatings, as supplied (in grams per liter).

(b) The manufacturer and/or repackager of solvents subject to this rule shall include on all containers the VOC content for solvents, as supplied (in grams per liter).

(F) Record Keeping Requirements

(1) All Persons subject to this rule and any Person claiming any exemption under sections (D)(1)(a) and (D)(1)(b) shall comply with the following requirements:

(a) Maintain and have available during an inspection, a current list of Automotive Coatings and solvents in use which provides all of the Coating data necessary to evaluate compliance, including the following information:

(i) The name and manufacturer;
(ii) The Coating Category type and the mix ratio of components used;
(iii) The VOC Actual and the VOC Regulatory content of each Automotive Coating as applied, or VOC content for solvent;
(iii) The Targeted HAP Compounds content as applied in weight percentage; and,
(v) The application method used.

(b) Maintain records on a daily basis including:

(i) Automotive Coating and mix ratio of components used in the Automotive Coating;
(ii) Quantity of each Automotive Coating applied;
(iii) Application method used to apply Automotive Coating; and,
(iv) Any Person/facility utilizing an add-on Emission Control System as a means of complying with provisions of this rule shall also maintain records of key system operating and maintenance data for the purpose of demonstrating continuous compliance during periods of emission producing activities. The data shall be recorded in a manner as prescribed by the District.

(c) Maintain records on a monthly basis for Surface Preparation and Cleaning Operations including:

(i) The name and manufacturer of the solvent used, including methylene chloride (MeCl).
(i) The amount of each solvent and methylene chloride (MeCl) consumed for any use, in gallons.

(ii) The weight percentage of each solvent and methylene chloride (MeCl) consumed for any use.

(d) Such records shall be retained and available for inspection by the APCO for a minimum of five (5) years.

(2) Any Person claiming any exemption under sections (D)(1)(c), (D)(1)(d), and (D)(1)(e) shall comply with the following requirements:

(b) Maintain records on a daily basis including:

(i) Exempt product type (i.e. Stencil Coating, Aerosol Coating Product, half-fluid ounce Coating);
(ii) The name and manufacturer of the exempted Coating type; and,
(iii) The amount of the exempted Coating type.

(G) Test Methods

(1) A violation of the limits contained in this rule as determined by any one of these test methods shall constitute a violation of this rule.

(2) The following specified test methods shall be used to determine compliance with the provisions of this rule.

(a) VOC Content of Coatings or Solvents

(i) The VOC content of Coatings or solvents shall be determined as prescribed by United States Environmental Protection Agency Reference Method 24 (without correction for Exempt Compounds) as set forth in Appendix A of Title 40 of the Code of Federal Regulations (40 CFR) Part 60, “Determination of Volatile Matter Content, Water Content, Density, Volume Solids, and Weight Solids of Surface Coatings”.

(b) Determination of Iridescent Particles/Metallic Content

(i) The metal and silicon content of Metallic/Iridescent Color Coatings shall be determined by South Coast Air Quality Management District Method 318-95, “Determination of Weight Percent Elemental Metal in Coatings by X-ray” (July 1996).

(c) Acid Content

(i) The acid content shall be determined by ASTM Test Method D1613-96, “Standard Test Method for Acidity in Volatile Solvents and Chemical Intermediates Used in Paint, Varnish, Lacquer, and Related Products” (May 1996).

(d) Reflectance of Anti-Glare Safety Coatings

(i) The reflectance of Anti-Glare Safety Coatings shall be measured by ASTM Test Method C523-89 (1989).

(e) Transfer Efficiency

(i) The transfer efficiency of alternative Coating application methods, as defined by subsection (C)(6)(a)(iii), shall be determined in accordance with the South Coast Air Quality Management District method "TE -Spray Equipment Transfer Efficiency Test Procedure for Equipment User, May 24, 1989."

(f) Equivalent Test Methods

(i) Other test methods determined to be equivalent after review by the staffs of the District, California Air Resources Board, and the United States Environmental Protection Agency, and approved in writing by the Air Pollution Control Officer may also be used for methods of analysis.

(g) Determination of Efficiency of Emission Control Systems

(i) Emissions of VOC for operations with Emission Control Systems shall be measured as prescribed by EPA Reference Method 25, 25A, or 25B for determining VOC emissions and control device efficiency, in combination with the USEPA method, “Guidelines for Determining Capture Efficiency” (January 9, 1995) and 40 CFR 51, Appendix M, Methods 204-204f as applicable for determination of capture efficiency.

(h) Determination of Methyl Acetate, Acetone, and PCBTF Content

(i) The quantity of methyl acetate , acetone, t-butyl acetate, and parachlorobenzotrifluoride shall be determined by using ASTM Method D6133-02: “Standard Test Method for Acetone, *p*-Chlorobenzotrifluoride, Methyl Acetate or *t*-Butyl Acetate Content of Solventborne and Waterborne Paints, Coatings, Resins, and Raw materials by Direct Injection Into a Gas Chromatograph” (February 2003).

(i) Determination of Alternative Compliance

(i) Alternative compliance shall be determined by USEPA Method 25, 25A, or 25B, Title 40 CFR Part 60, Appendix A as applicable. A source is in violation if the measured VOC emissions, as measured by any of the test methods, exceed the standards specified in Section (C)(1).

(j) Exempt Compound Content

(i) Exempt compound content, other than as determined pursuant to section (G)(2)(3), shall be determined by using CARB Method 432, “Determination of Dichloromethane and 1,1,1-Trichloroethane in Paints and Coatings” (September 12, 1989); CARB Method 422, “Determination of Volatile Organic Compounds in Emissions from Stationary Sources” (September 12, 1990); or, South Coast Air Quality Management District (SCAQMD) Method 303-91, “Determination of Exempt Compounds” (August 1996).

(k) HVLP Equivalency

(i) Transfer Efficiency equivalent to HVLP shall be determined by procedures as prescribed in the South Coast Air Quality Management District (SCAQMD) document "Guidelines for Demonstrating Equivalency with District Approved Transfer Efficient Spray Guns” (September 26, 2002).

(l) Multiple Test Methods

(i) When more than one test method or set of test methods are specified for any testing, a violation of any requirement of this rule established by any one of the specified test methods or set of test methods shall constitute a violation of the rule.

[See SIP Table at http://www.avaqmd.ca.gov/Modules/ShowDocument.aspx?documentid=921]

ANTELOPE VALLEY AIR POLLUTION CONTROL DISTRICT

RULE 1153. COMMERCIAL BAKERY OVENS

(Adopted January 4, 1991)(Amended January 13, 1995)

(a) Applicability

This rule controls volatile organic compound (VOC) emissions from commercial bakery ovens with a rated heat input capacity of 2 million BTU per hour or more and with an average daily emission of 50 pounds or more of VOC.

(b) Definitions

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

1. AVERAGE DAILY EMISSIONS is the product of the total calendar year emissions (in tons/year) divided by the number of days the oven was employed for production during that year.
2. BAKERY OVEN is an oven for baking bread or any other yeast leavened products by convection.
3. BASE YEAR is the calendar 1989 or any subsequent calendar year in which the average daily emissions are 50 pounds or more per day.
4. EMISSIONS are any VOC formed and released from the oven as a result of the fermentation and baking processes of yeast leavened products.
5. EXEMPT COMPOUNDS are any of the following compounds which have been determined to be non-precursors of ozone:

   (A) Group I (General)

   chlorodifluoromethane (HCFC-22)
   dichlorotrifluoroethane (HCFC-123)
   tetrafluoroethane (HFC-134a)
   dichlorofluoroethane (HCFC-141b)
   chlorodifluoroethane (HCFC-142b)
   trifluoromethane (HFC-23)
   2-chloro-1,1,1,2-tetrafluoroethane (HCFC-124)
   pentafluoroethane (HFC-125)
   1,1,2,2-tetrafluoroethane (HFC-143)
   1,1,1-trifluoroethane (HFC-143a)
   1,1-difluoroethane (HFC-152a)
   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
   sulfur-containing perfluorocarbons with no unsaturations and with
   sulfur bonds only to carbon and fluorine

   (B) Group II

   methylene chloride
   1,1,1-trichloroethane (methyl chloroform)
   trichlorotrifluoroethane (CFC-113)
   dichlorodifluoromethane (CFC-12)
   trichlorofluoromethane (CFC-11)
   dichlorotetrafluoroethane (CFC-114)
   chloropentafluoroethane (CFC-115)

The use of Group II compounds and/or carbon tetrachloride may be restricted in the future because they are toxic, potentially toxic, upper-atmosphere ozone depleters, or cause other environmental impacts. By January 1, 1996, production of chlorofluorocarbons (CFC), 1,1,1-trichloroethane (methyl chloroform), and carbon tetrachloride will be phased out in accordance with the Code of Federal Regulation Title 40, Part 82 (December 10, 1993).

6. EXISTING OVEN is an oven that was constructed and commenced operation prior to January 1, 1991.
7. FERMENTATION TIME is the elapsed time between adding yeast to the dough or sponge and placing it into the oven, expressed in hours.
8. LEAVEN is to raise a dough by causing gas to permeate it.
9. VOLATILE ORGANIC COMPOUNDS (VOC) is any volatile compound containing the element carbon, excluding carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates, methane, and exempt compounds.
10. YEAST PERCENTAGE is the pounds of yeast per hundred pounds of total recipe flour, expressed as a percentage.

(c) Requirements

1. No person shall operate an existing bakery oven unless VOC emissions are reduced by at least:

   (A) 70 percent by weight (as carbon) for an oven with a base year average daily VOC emissions of 50 pounds or more, but less than 100 pounds.

   (B) 95 percent by weight (as carbon) for an oven with a base year average daily VOC emissions of 100 pounds or more.

2. No person shall operate a new bakery oven unless VOC emissions are reduced by at least 95 percent by weight (as carbon) if the uncontrolled average daily VOC emissions are 50 pounds or more.

(d) Compliance Schedule

No person shall operate a bakery oven subject to this rule unless the following increments of progress are met:

1. For bakery ovens subject to subparagraph (c)(1)(A):

   (A) By January 1, 1992, submit required applications for permits to construct and operate.

   (B) By July 1, 1993, demonstrate compliance with subparagraph (c)(1)(A).

2. For bakery ovens subject to subparagraph (c)(1)(B):

   (A) By January 1, 1993, submit required applications for permits to construct and operate.

   (B) By July 1, 1994, demonstrate compliance with subparagraph (c)(1)(B).

3. For bakery ovens subject to paragraph (c)(2) be in compliance by July 1, 1992 or by the date of installation, whichever is later.

(e) Alternate Compliance Schedule

The paragraph (d)(1) and (d)(2) compliance deadlines may be postponed by one year if the owner of a bakery oven elects to replace the existing oven with a new one. Such election must be made by January 1, 1992 via a compliance plan submitted to, and subject to approval of, the Executive Officer or his designee. In approving such an election, the Executive Officer may impose interim conditions or control measures on the existing oven in order to assure compliance pending the installation or construction of the new, replacement oven.

(f) Exemptions

The provisions of subdivisions (c) and (d) do not apply to any existing bakery oven that emits less than 50 pounds of VOC per operating day on an uncontrolled basis. Daily VOC emissions shall be determined according to the calculation procedures of Attachment A, or according to any test methods specified in subdivision (h).

(g) Recordkeeping Requirements

Any person operating a bakery oven subject to this rule and claiming an exemption under subdivision (f) shall maintain a daily record of operations, including, but not limited to, the amount of raw material processed, yeast percentage, fermentation time, and the type of product baked. Such records shall be retained in the owner's or operator's files for a period of not less than two years.

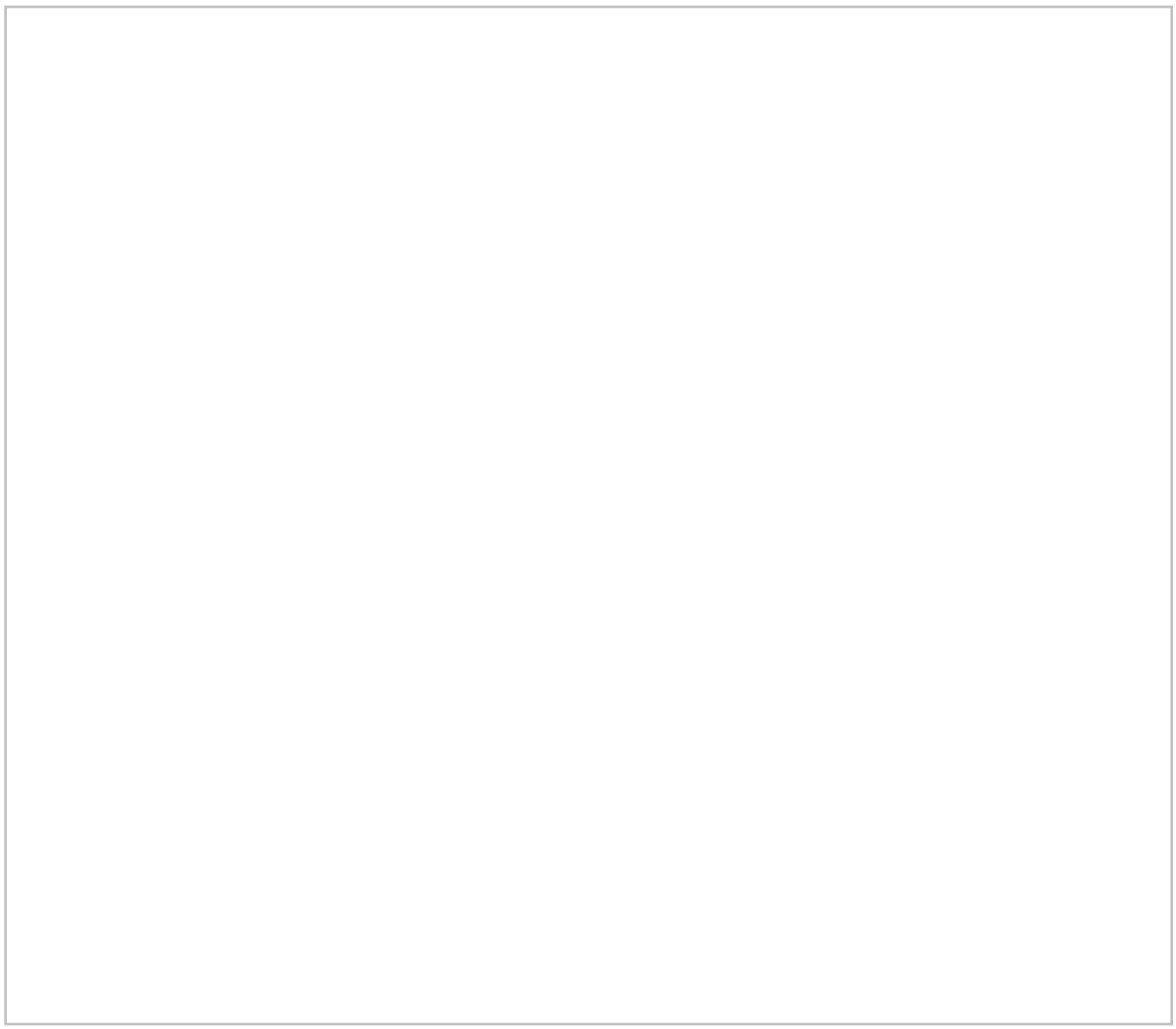
(h) Determination of Efficiency of Emission Control System

1. USEPA Test Method 25, or SCAQMD Test Method 25.1 (Determination of Total Gaseous Non-Methane Organic Emissions as Carbon) shall be used to determine compliance with this rule. Other test methods reviewed by the staffs of the SCAQMD, California Air Resources Board, and the USEPA, and approved in writing by the District Executive Officer may also be used to determine the efficiency of the emission control system.
2. Multiple Test Methods

   When more than one test method or set of test methods are specified for any testing, a violation of any requirement of this rule established by any one of the specified test methods or set of test methods shall constitute a violation of the rule.

3. All test methods referenced in this section shall be the most recent approved version.

ATTACHMENT A



ANTELOPE VALLEY AIR POLLUTION CONTROL DISTRICT

RULE 1158
STORAGE, HANDLING,
AND TRANSPORT OF PETROLEUM COKE

(Adopted December 2, 1983)

(a) Summary

The purpose of this rule is to reduce the potential of a public nuisance being generated by the emissions of airborne particulates from the storage, handling, and transport of petroleum coke. The rule will prohibit the open storage of petroleum coke after January 1, 1985, unless the operators can demonstrate that the pile poses no significant risk of violating any other District rule including the public nuisance rule. It is intended that the burden of proof will be on the operator.

Each operator of an open storage facility will be required to submit an Interim Petroleum Coke Storage Control Plan describing the steps that will be taken to construct enclosed structures and the interim measures that will be taken to mitigate any potential dust emissions until enclosed structures are constructed. If a plan cannot be approved, additional coke may not be added to the piles until approval is granted. The plan is the key to the goals of the rule, since a violation of any provision of the plan will be deemed a violation of the rule.

If the operator can demonstrate that compliance with the interim measures will likely prevent any violations of any other rules, the Executive Officer, after a public hearing, may approve the interim plan to be made permanent and exempt that facility from the requirement of enclosed storage. Such exemption shall be reviewed annually. The rule provides for a compliance schedule for constructing enclosed structures; it requires that construction begin by July 1, 1985, and compliance be assured by June 30, 1986.

In addition, the rule requires that trucks leaving the premises be washed and the loads watered, treated, or covered to prevent emissions. Furthermore, it requires the maintenance of certain records for review by the Executive Officer.

(b) Definitions

For the purpose of this rule:

1. Petroleum Coke is the solid carbonaceous residue remaining after all cracking and distillation of a petroleum refining operation.
2. Open Storage is the amassing and handling of solid material in an unconfined, uncovered pile.
3. Enclosed Storage is the containment of solid material in a structure or other article, contrivance, or device for which the Executive Officer has issued a permit to operate.
4. Facility is a parcel, that portion of a parcel, or parcels of land in actual physical contact or separated solely by a public roadway or other public right-of-way, on which petroleum coke is stored, and owned or operated by the same person (or by persons under common control).
5. New Facility is any facility not in operation on the date of adoption of this rule.

(c) Requirements

1. Coke Piles

   (A) A person shall not store petroleum coke in the open after January 1, 1985, except as otherwise provided for in

subparagraphs (c)(5) or (d) of this rule. In addition, an Interim Petroleum Coke Storage Control Plan must be filed with the Executive Officer and the appropriate city or county Planning Department within 30 days of the passage of this rule delineating the steps that will be taken to construct enclosed storage structures, and describing the interim measures that will be taken to mitigate any potential dust emissions. The Executive Officer shall notify the applicant within 60 days after filing of the Plan of his approval, conditional approval, or disapproval, or whether additional time to submit information is required, and grant additional time to submit the information, if necessary. A person shall not add petroleum coke to any open storage pile after an Interim Petroleum Coke Storage Control Plan is disapproved until the reasons for disapproval are overcome and such Plan as modified is approved, nor shall any person commence open storage of coke at a new facility, unless an Interim Petroleum Coke Storage Control Plan has been filed and approved as provided herein.

(B) The Interim Petroleum Coke Storage Control Plan submitted for approval shall contain as a minimum the following information:

(i) A contour map showing the location of the coke storage facility, the locations of the coke piles, and the surrounding land use.

(ii) Coke pile details consisting of the maximum daily amount of coke stored within the facility, the average and maximum daily wind velocities at the top of the coke piles, and the maximum height and coke pile configurations.

(iii) Mobile coke carrier details consisting of the type, size and maximum daily number of trucks; a description of the roadways used to transport the coke from the coke source to the facility to final destination, and the mitigation measures employed to contain the coke within open bed trucks.

(iv) Details describing the construction and operation of automatic truck washing systems.

(v) Details describing the construction and operation of a dust suppressant system for the coke piles.

(vi) Details describing the construction and operation of any permanent dust handling equipment and the associated dust control equipment within the facility.

(vii) Details describing the construction and operation of any existing or planned enclosed coke storage.

(viii) Details describing the type, number and use of mobile coke handling equipment operate on-site.

(ix) Housekeeping measures employed within and outside the facility to prevent fugitive coke dust.

(x) Details describing the type and method of use of any other mitigating measures employed to prevent the release of airborne coke dust, such as chemical suppressant systems, coke pile sealants, coke pile covers, and/or wind barriers.

(C) Persons subject to the provisions of the Interim Control Plan shall maintain for one year daily records of the tonnage and maximum height of the piles and the daily throughput in and out, by truckloads, of petroleum coke and provide these records for review by the Executive Officer on request.

2. All trucks, whether filled or empty, shall be washed sufficiently and all loads shall be watered, treated, covered or otherwise protected to prevent coke from being dropped onto public or private thoroughfares.
3. Failure to comply with any provision of the approved Petroleum Coke Storage Control Plan shall constitute a violation of this rule.
4. Compliance with the provisions of this rule or of the provisions of the Petroleum Coke Storage Control Plan does not exempt a person from complying with the requirements of Section 41700 and 41701 of the California Health and Safety Code, Rules 401, 402, and 403 of these Rules and Regulations, or any other applicable law, statute, code, ordinance, rule, or regulation.
5. In addition to the filing of the Interim Petroleum Coke Storage control Plan, a person constructing enclosed

storage shall meet the following compliance schedule:

(A) Negotiation and signing of contracts and submission of appropriate applications for permits to construct enclosed structures: January 1, 1985.

(B) Initiation of construction: July 1, 1985.

(C) Completion of construction: June 1, 1986.

(D) Assurance of final compliance: June 30, 1986.

(d) Exemptions

If an operator of an open petroleum coke storage facility can demonstrate that compliance with the Interim Petroleum Coke Storage Control Plan is sufficient to pose no significant risk of violating any other District rule, the Executive Officer may, after a hearing to which all affected persons are invited, waive the requirement that coke at the storage facility be enclosed and order the Interim Plan be made permanent, subject to annual review. At least 30 days prior to the required hearing, notice of the hearing shall be publicized in such newspaper of general circulation as the Executive Officer shall prescribe and shall be mailed to any person who has requested such notice.

(e) For the purpose of determining the appropriate processing fees only, the filing of a Petroleum Coke Storage Control Plan shall be considered the equivalent of filing an application for permit. The person submitting the Plan shall be assessed a filing fee and an engineering evaluation fee as described in Rules 301 and 301.1.

(f) If any portion of this rule shall be found to be invalid or unenforceable, such finding shall have no effect on the validity and enforceability of the remaining portions of the rule, which are severable and shall continue to be in full force and effect.

(g) The provisions of paragraph (a) are intended only to summarize Rule 1158 and to give guidance as to its interpretation. The provisions of paragraph (a) are not separate or distinct requirements, and if found to conflict with any other provision, there shall be no effect on the validity and enforceability of the rest of the rule.

ANTELOPE VALLEY AIR POLLUTION CONTROL DISTRICT

RULE 1162
POLYESTER RESIN OPERATIONS

(Adopted March 6, 1987)(Amended April 3, 1987)(Amended August 3, 1990)
(Amended December 7, 1990) (Amended August 2, 1991)(Amended July 10, 1992) (Amended May 13, 1994)

(a) Applicability

This rule shall apply to all polyester resin operations that fabricate, rework, repair, or touch-up products for commercial, military, or industrial use including, but not limited to, boats, tubs, pools, shower enclosures, spas, bathroom fixtures, jigs, tools, molds, air pollution control equipment, sewage treatment equipment, storage tanks, transportation parts, and other industrial and consumer products.

(b) Definitions

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

1. AIRLESS SPRAY is a coating application system in which the coating fluid is supplied to the gun under fluid pressure and air is not added to the gun.
2. AIR-ASSISTED AIRLESS SPRAY is a coating application system in which the coating fluid is supplied to the gun under fluid pressure and air is combined at the spray cap.
3. CORROSION-RESISTANT MATERIALS are polyester resin materials used to make products for corrosion resistant applications such as tooling, fuel or chemical tanks and boat hulls.
4. EXEMPT COMPOUNDS are any of the following compounds:

   (A) Group I

   chlorodifluoromethane (HCFC-22)

   dichlorotrifluoroethane (HCFC-123)

   tetrafluoroethane (HFC-134a)

   dichlorofluoroethane (HCFC-141b)

   chlorodifluoroethane (HCFC-142b)

   trifluoromethane (HFC-23)

   2-chloro-1,1,1,2-tetrafluoroethane (HCFC-124)

   pentafluoroethane (HFC-125)

   1,1,2,2-tetrafluoroethane (HFC-134)

   1,1,1-trifluoroethane (HFC-143a)

   1,1-difluoroethane (HFC-152a)

   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

sulfur-containing perfluorocarbons with no unsaturations and with sulfur bonds only to carbon and fluorine

(B) Group II

methylene chloride

carbon tetrachloride

1,1,1-trichloroethane (methyl chloroform)

trichlorotrifluoroethane (CFC-113)

dichlorodifluoromethane (CFC-12)

trichlorofluoromethane (CFC-11)

dichlorotetrafluoroethane (CFC-114)

chloropentafluoroethane (CFC-115)

Use of Group II compounds may be restricted in the future because they are either toxic, potentially toxic, or upper-atmosphere ozone depleters, or cause other environmental impacts. Specifically, the District Board has established a policy to phase out chlorofluorocarbons (CFCs), methyl chloroform (1,1,1-trichloroethane or TCA), and carbon tetrachloride by December 31, 1995.

5. FIRE RETARDANT MATERIALS are polyester resin materials used to make products that are resistant to flame or fire.
6. GEL COAT is a polyester resin surface coating, either pigmented or clear, that provides a cosmetic enhancement and improves resistance to degradation from exposure to the elements.
7. GENERAL PURPOSE POLYESTER RESINS are materials that are not corrosion resistant, fire retardant, high strength, vapor suppressed, or gel coats.
8. HIGH-STRENGTH MATERIALS are polyester resins which have casting tensile strength of 10,000 psi or more and which are used for manufacturing of high performance boats and skis.
9. HIGH-VOLUME, LOW-PRESSURE (HVLP) SPRAY is a coating application system which is operated at air pressure of between 0.1 and 10 pounds per square inch gauge (psig) at the air cap of the spray gun.
10. MONOMER is a relatively low-molecular-weight organic compound such as styrene that combines with itself, or other similar compounds, by a cross-linking reaction to become a cured thermosetting resin.
11. POLYESTER RESIN MATERIALS are unsaturated polyester resins, such as isophthalic, orthophthalic, halogenated, bisphenol A, vinyl ester, or furan resins; cross-linking agents; catalysts; gel coats; inhibitors; accelerators; promoters; and any other material containing VOC used in polyester resin operations.
12. POLYESTER RESIN OPERATIONS fabricate, rework, repair, or touch-up products for commercial, military, or industrial use by mixing, pouring, hand laying-up, impregnating, injecting, forming, winding, spraying, and/or curing by using unsaturated polyester resin materials.
13. PULTRUSION is a process where continuous roving strands are moved through a strand-tensioning device into a resin bath for impregnation and then passed through a heated die for curing.
14. REPAIR is that portion of the fabrication process that requires the addition of polyester resin materials to portions of a previously fabricated product in order to mend damage.
15. TOUCH-UP is that portion of the process that is necessary to cover minor imperfections.
16. VAPOR SUPPRESSED RESIN is a polyester resin material which contains additives to reduce VOC evaporation loss to less than sixty (60) grams per square meter of surface area as determined and certified by resin manufacturers.
17. VOLATILE ORGANIC COMPOUND (VOC) means any volatile chemical compound that contains the element carbon, excluding methane, carbon monoxide, carbon dioxide, carbonic acid, metallic carbides and carbonates,

ammonium carbonate, and exempt compounds.

(c) Requirements

1. For each process, a person operating a polyester resin operation shall comply with either the material requirements or one of the applicable process requirements set forth below:

   (A) Material Requirements

   A person shall not use a polyester resin material in a polyester resin operation which has a monomer content in excess of the limits specified in the Table below.

Polyester Resin Materials	**Monomer Content in Polyester Resin Materials as Applied (by Weight Percent)**
General Purpose Polyester Resin	35
Corrosion-Resistant	48
Fire Retardant	42
High Strength	48
Clear Gel Coat	50
Pigmented Gel Coat	45

   (B) Process Requirements

      (i) The weight loss of polyester materials shall be less than four (4) percent when a closed-mold system is used.

      (ii) When a vapor suppressed resin is used, the weight loss from VOC emissions shall not exceed sixty (60) grams per square meter of exposed surface area during resin polymerization.

      (iii) A pultrusion operation shall have covered wet-out baths. From the exit of the bath to the die all but 18 inches of the preform distance shall be enclosed to minimize air flow. The weight loss of polyester materials shall be less than three (3) percent in a pultrusion operation.

2. For spraying operations, in addition to complying with the requirements specified in paragraph (c)(1), a person shall use high-volume-low-pressure (HVLP), airless, air-assisted airless, or electrostatic spray equipment. For touch-up and repair, a hand-held, air-atomized spray gun which has a container for resin as part of the gun may be used.
3. Any person operating a polyester resin operation shall keep the resin materials in closed containers except when filling or emptying the container.
4. Solvent cleaning operations shall comply with Rule 1171 - Solvent Cleaning Operations.

(d) Control Equipment

In lieu of complying with the requirements of paragraph (c)(1) and (c)(2), a person may install and operate an emission control system which is designed and operated in accordance with guidelines published in the 20th Edition of the Industrial Ventilation Manual by the American Conference of Governmental Industrial Hygienists for the collection of fugitive emissions from polyester resin materials, and which system is approved by the Executive Officer's designee, and has an overall capture and control efficiency of 90 percent or more on a mass basis.

(e) Recordkeeping Requirements

1. A person subject to the provisions of this rule shall maintain daily records. Such records shall be made available to the Executive Officer's designee upon request and shall be kept for not less than two years. The records shall contain:

(A) The manufacturer's name, the type and amount of each of the polyester resin materials used; and

(B) The weight (in percent) of monomer for all polyester resin materials, and, if adding VOC-containing materials to the polyester resin, the amount of VOC-containing materials, in grams, and the VOC content in grams per liter, of VOC-containing materials; and

(C) For vapor suppressed resins, a certificate from a resin manufacturer for each resin type; and

(D) For closed-mold and pultrusion systems, the weight loss (in percent) of polyester resin materials for each application.

2. Records for cleaning solvents subject to Rule 1171 - Solvent Cleaning Operations shall be maintained pursuant to Rule 109.
3. Any person using an emissions control system as a means of complying with this rule shall maintain daily records of all key system parameters, including hours of operation, temperatures, pressures and flow rates, that are necessary to ensure control efficiency requirements.
4. The records shall also contain the manufacturer's name, type and amount of corrosion resistant, fire retardant, high strength materials and gel coats used, which are temporarily exempt from process requirements until July 1, 1994.

(f) Methods of Analysis

The VOC content of each of the polyester resin materials shall be determined by using USEPA Reference Method 24 (Determination of Volatile Matter Content, Water Content, Density Volume Solids, and Weight Solids of Surface Coating, Code of Federal Regulations Title 40, Appendix A, utilizing Procedure B of ASTM Method D2369), or the SCAQMD Method 304. The monomer content shall be determined by Method 312, and weight loss of polyester resin materials shall be determined by Method 309; and the exempt compound's content shall be determined by Methods 302 and 303 in the South Coast Air Quality Management District's (SCAQMD) Laboratory Methods of Analysis for Enforcement Samples.

(g) Test Methods

1. The efficiency of the control device and the VOC content measured and calculated as carbon in the control device exhaust gases shall be determined by USEPA's Test Method 18, or Air Resources Board (ARB) Method 422 for the determination of emissions of Exempt Compounds and USEPA's Test Methods 25, 25A, or SCAQMD's Method 25.1 (Determination of Total Gaseous Non-Methane Organic Emissions as Carbon) for the determination of total organic compound emissions. Emissions determined to exceed any limits established by this rule through the use of any of the above-referenced test methods shall constitute a violation of the rule.
2. The following classes of 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-contained perfluorocarbons with no unsaturations and with sulfur bonds only to carbon and fluorine, will be analyzed as exempt compounds for compliance with subdivision (e) at such time manufacturers specify which individual compounds are used in the coating formulations and identify the test methods, which, prior to such analysis, have been approved by the USEPA and the SCAQMD, that can be used to quantify the amounts of each exempt compound.

(h) Exemptions

1. Until July 1, 1994, the provisions of paragraphs (c)(1) and (c)(2) and subdivision (d) shall not apply to: corrosion resistant, fire retardant, and high strength materials.
2. Until July 1, 1994, The provisions of (c)(1) shall not apply to gel coats.

ANTELOPE VALLEY AIR POLLUTION CONTROL DISTRICT

RULE 1164. SEMICONDUCTOR MANUFACTURING

(Adopted July 8, 1988)(Amended May 5, 1989)(Amended March 2, 1990)
(Amended December 7, 1990)(Amended January 13, 1995)

(a) Applicability

This rule is applicable to all direct, indirect, and support stations associated with the manufacture or production of semiconductor devices. Semiconductor device manufacturing includes all processing from crystal growth through circuit separation and encapsulation, including wafer production, oxidation, photoresist operation, etching, doping, and epitaxial growth operation.

(b) Definitions

For the purpose of this rule, the following definitions apply:

1. APPROVED EMISSION CONTROL SYSTEM means any system used to reduce VOC emissions and consists of a collection and control device, which are approved in writing by the Executive Officer. The emission control system shall have an overall efficiency of at least 90 percent.
2. EXEMPT COMPOUNDS are any of the following compounds:

   (A) Group I (General)

   trifluoromethane (HFC-23)
   pentafluoroethane (HFC-125)
   1,1,2,2-tetrafluoroethane (HFC-134)
   tetrafluoroethane (HFC-134a)
   1,1,1-trifluoroethane (HFC-143a)
   1,1-difluoroethane (HFC-152a)
   chlorodifluoromethane (HCFC-22)
   dichlorotrifluoroethane (HCFC-123)
   2-chloro-1,1,1,2-tetrafluoroethane (HCFC-124)
   dichlorofluoroethane (HCFC-141b)
   chlorodifluoroethane (HCFC-142b)
   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
   sulfur-containing perfluorocarbons with no unsaturations and with sulfur bonds only to carbon and fluorine

   (B) Group II

   methylene chloride
   1,1,1-trichloroethane (methyl chloroform)
   trichlorotrifluoroethane (CFC-113)
   dichlorodifluoromethane (CFC-12)
   trichlorofluoromethane (CFC-11)
   dichlorotetralfuoroethane (CFC-114)
   chloropentafluoroethane (CFC-115)

   The use of Group II compounds and/or carbon tetrachloride may be restricted in the future because they are toxic, potentially toxic, upper atmospheric ozone depleters, or cause other environmental impacts. By January 1, 1996, production of chlorofluorocarbons (CFC), 1,1,1-trichloroethane (methyl chloroform), and carbon tetrachloride

will be phased out in accordance with the Code of Federal Regulations Title 40, Part 82 (December 10, 1993).

3. FREEBOARD HEIGHT is the distance from the top of the solvent or solvent overflow drain to the top of the sink or reservoir.
4. FREEBOARD RATIO is the freeboard height divided by the smaller of the length or width of the sink or reservoir.
5. GRAMS OF VOC PER LITER OF COATING, LESS WATER AND LESS EXEMPT COMPOUNDS, is the weight of VOC per combined volume of VOC and coating solids, and can be calculated by:

$$\text{Grams of VOC per Liter of Coating Less Water and Less Exempt Compounds} = \frac{Ws - Ww - Wes}{Vm - Vw - Ves}$$

Where: Ws = weight of volatile compounds in grams
Ww = weight of water in grams
Wes = weight of exempt compounds in grams
Vm = volume of material in liters
Vw = volume of water in liters
Ves = volume of exempt compounds in liters

6. GRAMS OF VOC PER LITER OF MATERIAL is the weight of VOC per volume of material and can be calculated by:

$$\text{Grams of VOC per Liter of Material} = \frac{Ws - Ww - Wes}{Vm}$$

Where: Ws = weight of volatile compounds in grams
Ww = weight of water in grams
Wes = weight of exempt compounds in grams
Vm = volume of material in liters

7. MASKING is applying a photoresist maskant material or overlaying a stencil to apply, impress, transfer, or otherwise effect a pattern on or into another substance.
8. PHOTORESIST MASKANT, MASKANT, OR PHOTORESIST is a coating applied directly to a component to protect surface areas when chemical milling, etching, or other chemical surface operations are performed on the component.
9. PHOTORESIST OPERATION is a process for the application and development of photoresist masking solution on a wafer, including preparation (except primary cleaning), soft bake, develop, hard bake, and stripping, and can be generally subdivided as follows:

   (A) NEGATIVE PHOTORESIST OPERATION is a process where the maskant hardens when exposed to light and the unhardened maskant is stripped, exposing the wafer surface for etching.

   (B) POSITIVE PHOTORESIST OPERATION is a process where the maskant softens when exposed to light and the softened maskant is stripped, exposing the wafer surface for etching.

10. SEMICONDUCTOR MANUFACTURE is any process or operation performed to produce semiconductor devices or related solid state devices. It may include but is not limited to the manufacturing of diodes, zeners, stacks,

rectifiers, integrated microcircuits, transistors, solar cells, light-sensing devices, and light-emitting devices.

11. SOLVENT is any material containing VOC or any exempt compound that dissolves or can dissolve another substance. Developers and stripping agents that contain VOC or any exempt compound are included as solvents.
12. SOLVENT CLEANING STATION is a workplace equipped to remove surface contaminants using a liquid or vapor solvent containing volatile organic compounds.
13. STRIPPING is the removal of spent photoresist maskant from the product after etching, or the removal of oxide stencil from the product after diffusion.
14. VOC COMPOSITE PARTIAL PRESSURE is the sum of the partial pressures of the compounds defined as VOCs.

    VOC Composite Partial Pressure is calculated as follows:

    Where:
    Wi = Weight of the "i"th VOC compound, in grams
    Ww = Weight of water, in grams
    We = Weight of exempt compound, in grams
    MWi = Molecular weight of the "i"th VOC compound, in grams per gram-mole
    MWw = Molecular weight of water, in grams per gram-mole
    MWe = Molecular weight of exempt compound, in grams per gram-mole

    PPc = VOC composite partial pressure at 20^{o}C, in mm Hg

    VPi = Vapor pressure of the "i"th VOC compound at 20^{o}C, in mm Hg
15. VOLATILE ORGANIC COMPOUND (VOC) is any volatile compound containing the element carbon excluding methane, carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates, ammonium carbonate, and exempt compounds.

(c) Requirements

1. Solvent Cleaning Stations

   A person shall not operate a solvent cleaning station at a semiconductor manufacturing facility unless the following requirements are satisfied.

   (A) All heated or unheated reservoirs, sinks, tanks and containers which transfer, store, or hold VOC-containing material shall be provided with a full cover or an approved emission control system. These covers must remain closed except while production, sampling, maintenance, or loading or unloading procedures require operator access.

   (B) All heated or unheated reservoirs and sinks holding VOC-containing fluids with a VOC composite partial pressure of 33 mm Hg or less at 20^{o}C (68^{o}F), shall have a freeboard ratio greater than or equal to 1.0, or be equipped with an approved emission control system.

   (C) Solvent flow of VOC-containing materials shall be applied in a continuous unbroken stream and in a manner which shall prevent liquid loss resulting from splashing.

(D) Liquid solvent leaks of 3 drops per minute or more shall be repaired within 24 hours of detection or the equipment shall be shut down until replaced or repaired.

(E) All equipment at a solvent cleaning station shall be operated and maintained in proper working order.

2. Photoresist Operations

   A person shall not allow photoresist operations at a semiconductor manufacturing facility unless the VOC-containing vapors are vented to an approved emission control system.

3. Cleanup Solvents

   A person shall not use VOC-containing materials for the purpose of cleaning equipment at a semiconductor manufacturing facility unless the following requirements are satisfied.

   (A) The VOC content of the fluid shall not exceed 200 grams per liter (1.7 pounds per gallon) of material; or the VOC composite partial pressure shall not exceed 33 mm Hg (0.64 psia) at a temperature of 20^{o}C (68^{o}F); or the components being cleaned are totally enclosed during the washing, rinsing, and draining processes; or the cleanup solvents are flushed or drained in a manner that does not allow evaporation into the atmosphere; and

   (B) only nonabsorbent, closed containers shall be used for the storage, transfer, or disposal of all VOC-containing accessories which include, but are not limited to, cloth, paper, and other materials clearly used for cleanup with solvents.

4. Alternative Emission Control Plan

   An owner/operator may achieve compliance with subparagraph (c)(1) and/or (c)(2) by means of an Alternative Emission Control Plan pursuant to Rule 108.

5. Recordkeeping

   Notwithstanding the provisions of subdivision (g), records shall be maintained pursuant to Rule 109.

(d) Prohibition of Specifications

A person shall not specify the use of any VOC-containing material for any process or operation within the SCAQMD, subject to the provisions of this rule, that does not meet the requirements of this rule. This prohibition shall apply to all written or oral contracts.

(e) Test Methods

1. Determination of VOC Content

   The VOC content of materials subject to the provisions of this rule shall be determined by the following the methods:

   (A) United States Environmental Protection Agency (USEPA) Reference Method 24 (Code of Federal Regulations Title 40 Part 60, Appendix A). The exempt compound content shall be determined by SCAQMD Method 303 (Determination of Exempt Compounds) contained in the SCAQMD "Laboratory Methods of Analysis for Enforcement Samples" manual; or,

   (B) SCAQMD Method 304 [Determination of Volatile Organic Compounds (VOC) in Various Materials] contained in the SCAQMD "Laboratory Methods of Analysis for Enforcement Samples" manual.

   (C) Exempt Perfluorocarbon Compounds

The following classes of 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 sulfur bonds only to carbon and fluorine,

will be analyzed as exempt compounds for compliance with paragraph (c), only when manufacturers specify which individual compounds are used in the coating formulation. In addition, the manufacturers must identify the USEPA, the California Air Resources Board, and the SCAQMD approved test methods used to quantify the amount of each exempt compound.

2. Determination of VOC Composite Partial Pressure

   The identity and quantity of components in solvents shall be determined by SCAQMD Method 308 (Quantitation of Compounds by Gas Chromatography) contained in the SCAQMD "Laboratory Methods of Analysis for Enforcement Samples" manual. The VOC composite partial pressure is calculated using equation in paragraph (b)(14).

3. Determination of Efficiency of Emission Control System

   (A) The efficiency of the collection device of the emission control system as specified in subparagraph (c)(1)(A) and (c)(1)(B) shall be determined by the USEPA method cited in 55 Federal Register 26865 (June 29, 1990), or any other method approved by the USEPA, the California Air Resources Board, and the SCAQMD.

   (B) The efficiency of the control device of the emission control system as specified in subparagraph (c)(1)(A) and (c)(1)(B),and the VOC content in the control device exhaust gases, measured and calculated as carbon, shall be determined by USEPA Test Methods 25, 25A, or SCAQMD Method 25.1 (Determination of Total Gaseous Non-Methane Organic Emissions as Carbon) as applicable. USEPA Test Method 18, or ARB Method 422 shall be used to determine emissions of exempt compounds.

4. Multiple Test Methods

   When more than one test method or set of test methods are specified for any testing, a violation of any requirement of this rule established by any one of the specified test methods or set of test methods shall constitute a violation of the rule.

5. All test methods referenced in this section shall be the most recent approved version.

(f) Rule 442 Applicability

Any operation or facility which is exempt from all or a portion of this rule shall comply with the provisions of Rule 442.

(g) Exemptions

The provisions of this rule shall not apply to facilities that produce less than five pounds of total VOC emissions over any continuous 24-hour period.

ANTELOPE VALLEY AIR POLLUTION CONTROL DISTRICT

RULE 1166
VOLATILE ORGANIC COMPOUND
EMISSIONS FROM DECONTAMINATION OF SOIL

(Adopted August 5, 1988)(Amended July 14, 1995)

(a) Applicability

This rule sets requirements to control the emission of Volatile Organic Compounds (VOC) from VOC-contaminated soil as a result of leakage from storage or transfer facilities, from accidental spillage, or other deposition.

(b) Definitions

1. EXEMPT COMPOUNDS are defined in Rule 102 -- Definition Of Terms.

2. SOIL DECONTAMINATION MEASURE is any process approved by the Executive Officer or designee to remediate, destroy, remove, or encapsulate VOC and VOC-contaminated soil.

3. UNDERGROUND STORAGE TANK means any one or combination of tanks, including pipes connected thereto, which is used for the storage of organic liquid which is more than 50% beneath the surface of the ground.

4. VOC CONTAMINATED SOIL is a soil which registers a concentration of 50 ppm or greater of Volatile Organic Compounds, when measured at a distance of no more than three inches from the surface of the excavated soil with an organic vapor analyzer calibrated with hexane, complying with 40 CFR Part 60 Appendix A, EPA Method 21 Section 3, or any equivalent method approved in writing by the Executive Officer or designee, the Chairman of the Air Resources Board or designee, and the Administrator of the United States Environmental Protection Agency or designee. If other calibrating gases were used, then the measured readings shall be correlated to and expressed as hexane.

5. VOC CONTAMINATED SOIL MITIGATION PLAN is plan to minimize VOC emissions during excavation and any subsequent handling of VOC-contaminated soil.

6. VOLATILE ORGANIC COMPOUND (VOC) is any volatile compound of carbon, excluding methane, carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates, ammonium carbonate, and exempt compounds.

(c) Requirements

1. A person excavating an underground storage tank and/or transfer piping storing or previously storing VOC shall:

   (A) Obtain an approved mitigation plan from the Executive Officer or designee prior to commencement of excavation.

   (B) Notify the Executive Officer or designee by telephone at least 24 hours prior to excavation. Such notification shall include:

      (i) Name and telephone number of the property owner.

(ii) Name and telephone number of the person excavating soil.

(iii) Location of the facility and location of the excavation.

(iv) VOC previously stored in the tank.

(v) Number and sizes of tanks to be removed or repaired.

(vi) Approved mitigation plan number.

(vii) Start and expected completion dates of the excavation.

If the excavation does not commence on start date, renotification is required.

An alternative notification procedure may be authorized for multiple excavations within a single facility, with prior written approval from the Executive Officer or designee.

(C) Monitor for VOC contamination at least once every 15 minutes and record all VOC concentration readings in a format approved by the Executive Officer or designee; and

(D) When VOC-contaminated soil is detected:

(i) Implement approved mitigation plan, and

(ii) Notify the Executive Officer or designee within 24 hours of detection of VOC-contaminated soil.

2. A person handling VOC-contaminated soil shall comply with the provisions in subparagraphs (c)(1)(A) and (c)(1)(D)(i).

3. A person treating VOC-contaminated soil shall:

(A) Obtain a permit to construct and/or operate control equipment, as applicable, from the Executive Officer or designee, and

(B) Implement VOC-contaminated soil decontamination measures, as approved by the Executive Officer or designee in writing, which result in Best Available Control Technology during all segments, and which include, but are not limited to, at least one of the following:

(i) Installation and operation of an underground VOC collection system and a disposal system prior to excavation.

(ii) Collection and disposal of the VOC from the excavated soil on-site using equipment approved by the Executive Officer or designee.

(iii) Any equivalent VOC-contaminated soil control measure previously approved in writing by the Executive Officer or designee.

4. A person shall not engage in or allow any on-site or off-site spreading of VOC-contaminated soil which results in uncontrolled evaporation of VOC to the atmosphere.

(d) Exemptions

1. The provisions of this rule shall not apply to the following:

(A) Excavation, handling, and treating of less than one (1) cubic yard of contaminated soil.

(B) Removal of soil for sampling purposes.

(C) Accidental spillage of five (5) gallons or less of VOC.

2. The provisions of subparagraphs (c)(2), (c)(3), and (c)(4) shall not apply to the following:

   (A) Soil containing organic compounds that have initial boiling points of 302oF or greater, provided that soil is not heated.

   (B) Soil which is contaminated through natural seepage of VOC from oil and gas wells or other natural sources.

   (C) Soil containing organic compounds having a Reid vapor pressure (RVP) less than 80 mm Hg (1.55 pounds per square inch), or an absolute vapor pressure (AVP) less than 36 mm Hg (0.7 psi) at 20oC.

3. The provisions of subparagraphs (c)(1) and (c)(2) shall not apply to soil excavation or handling as a result of an emergency as declared by an authorized health officer, agricultural commissioner, fire protection officer, or other authorized agency officer. Whenever possible, the Executive Officer or designee shall be notified by telephone prior to commencing such excavation. The Executive Officer or designee shall be notified in writing no later than 48 hours following such excavation. Written notification shall include written emergency declaration from the authorized officer.

(**Adopted**: 04/07/89; **Amended**: 02/01/91; **Amended**: 02/01/91; **Amended**: 07/19/91; **Amended**: 08/02/91; **Amended**: 12/04/92; **Amended**: 12/10/93; **Amended**: 04/11/97; **Amended**: 01/19/10; **Amended**: 09/20/11)

Rule 1168
Adhesive and Sealant Applications

(A) General

(1) The purpose of this rule is to reduce emissions of Volatile Organic Compounds (VOCs) and to eliminate emissions of chloroform, ethylene dichloride, methylene chloride, perchlorethylene, and trichlorethylene from the application of Adhesives, Adhesive Primers, Sealants, Sealant Primers or any other Primers.

(2) This rule shall apply to all commercial and industrial sales and applications of Adhesives, Adhesive Primers, Sealants, Sealant Primers, or any other Primers, unless otherwise specifically exempted by this rule.

(B) Definitions

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

(1) Acrylonitrile-Butadiene-Styrene (ABS) - A Plastic made by reacting monomers of acrylonitrile, butadiene, and styrene and is normally identified with an ABS marking.

(2) Adhesive - Any substance that is used to bond one surface to another surface by attachment. Adhesives include, Adhesive Bonding Primers, Adhesive Primers, Adhesive Primers for Plastics and any other Primer used with Adhesives.

(3) Adhesive Bonding Primer - An Adhesive applied to a surface to improve the bond of subsequent Adhesives and sometimes to inhibit corrosion.

(4) Adhesive Primer - A coating applied to a substrate, prior to the application of an Adhesive, to provide a bonding surface.

(5) Adhesive Primer for Plastic - A material applied to a Plastic substrate alone or before applying an Adhesive in order to obtain better adhesion.

(6) Adhesive Solid - The nonvolatile portion of an Adhesive that remains after heating a sample of the material at 110^{o}C for one hour.

(7) Aerosol Adhesive - Any Adhesive packaged as an aerosol product in which the spray mechanism is permanently housed in a non-refillable can designed for hand-held application without the need for ancillary hoses or spray equipment. Aerosol Adhesives include special purpose spray Adhesives, mist spray

Adhesives, and web spray Adhesives as defined by 17 Cal. Code Regs. §§94507 et seq.

(8) Aerosol Spray Can - A hand held, pressurized, non-refillable container which expels Adhesives from the container in a finely divided spray when a valve on the container is depressed.

(9) Aerospace Component - The fabricated part, assembly of parts, or completed unit of any Aircraft or Space Vehicle (excluding tires), and includes models, mock-ups, prototypes, and test coupons.

(10) Aircraft - Any machine designed to travel through the air, without leaving the Earth's atmosphere, whether heavier or lighter than air, including airplanes, balloons, dirigibles, helicopters, and missiles.

(11) Aircraft Tire Repair - The repair and retreading of used tires used on Aircraft. This includes the repair of damage to the tire casing, removal of old tread Rubber and tread reinforcing materials, and application of new tread and tread reinforcing materials.

(12) Air Pollution Control Officer (APCO) - The person appointed to the position of Air Pollution Control Officer of the District pursuant to the provisions of California Health & Safety Code §40750 and his or her designee.

(13) Architectural - Pertaining to stationary structures including buildings, houses, and mobile homes, and their appurtenances.

(14) Architectural Application - The use of an Adhesive, Sealant, Adhesive Primer, or Sealant Primer on stationary structures, including mobile homes, and their appurtenances. Appurtenances to an Architectural structure include, but are not limited to: hand railings, cabinets, bathroom and kitchen fixtures, fences, rain gutters and downspouts and windows.

(15) Architectural Sealant or Sealant Primer - Any Sealant or Sealant Primer applied to stationary structures, including mobile homes, and their appurtenances. Appurtenances to an Architectural structure include, but are not limited to: hand railings, cabinets, bathroom and kitchen fixtures, fences, rain gutters and downspouts and windows.

(16) California Air Resources Board (CARB) - The California State Air Resources Board the powers and duties of which are described in Part 2 of Division 26 of the California Health & Safety Code (commencing with §39500).

(17) Carpet Pad Adhesive - An Adhesive used for the installation of carpet pad (or cushion) beneath a carpet.

(18) Ceramic Tile Adhesive - An Adhesive used in the installation of Ceramic Tile products.

(19) Ceramic Tiles - A ceramic surfacing unit made from clay or a mixture of clay and other materials.

(20) Chlorinated Polyvinyl Chloride (CPVC) - Plastic which is a polymer of the chlorinated polyvinyl monomer that contains 67 percent chlorine and is normally identified with a CPVC marking.

(21) Coating Solid - The nonvolatile portion of a coating that remains after heating a sample of the material at 110^{o}C for one hour.

(22) Computer Diskette Manufacturing - The process where the fold-over flaps are glued to the body of a vinyl jacket.

(23) Contact Adhesive - An Adhesive applied to two (2) separate surfaces, allowed to dry, and brought together for adhesion and bonding with subsequent pressure.

(24) Cove Base Installation Adhesive - An Adhesive used during the installation of cove base (or wall base), which is generally made of vinyl or Rubber, on a wall or vertical surface at floor level.

(25) Cyanoacrylate Adhesive - A single-component Reactive Diluent Adhesive that contains at least 85 percent by weight ethyl, methyl, methoxymethyl or other functional groupings of cyanoacrylate.

(26) District - The Antelope Valley Air Quality Management District the geographical area of which is described in District Rule 103.

(27) Drywall Adhesive - An Adhesive used during the installation of gypsum dry wall to studs or solid surfaces.

(28) Exempt Compounds - A compound identified as exempt in 40 CFR 51.100(s).

(29) Facility - Any permit unit or grouping of permit units or other air contaminant-emitting activities which are located on one or more contiguous properties within the District, in actual physical contact or separated solely by a public roadway or other public right-of-way, and are owned or operated by the same Person (or by Persons under common control). Such above-described groupings, if not contiguous, but connected only by land carrying a pipeline, shall not be considered one Facility.

(30) Fiberglass - Fine filaments of glass.

(31) Flexible Vinyl - Non-rigid polyvinyl chloride Plastic with a five (5) percent by weight plasticizer content.

(32) Floor Covering Installation Adhesive (Indoor) - Any Adhesive intended by the manufacturer for use in the installation of vinyl backed carpet, resilient sheet and roll or artificial grass. Adhesives used to install ceramic tile, perimeter bonded Sheet Vinyl, Flexible Vinyl, indoor carpet, Rubber Floor, Subfloor. VCT and Asphalt Tile and wood flooring are excluded from this category.

(33) Floor Covering Installation Adhesive (Outdoor) - Any Adhesive intended by the manufacturer for use in the installation of floor covering that is not in an enclosure and that is exposed to ambient weather conditions during normal use. Outdoor Carpet is excluded from this category.

(34) Foam - A rigid or spongy cellular mass with gas bubbles dispersed throughout.

(35) Glue - A hard gelatin obtained from hides, tendons, cartilage, bones, etc., of animals.

(36) Grams of VOC Per Liter of Adhesive, Less Water and Less Exempt Compounds - The weight of VOC per combined volume of VOC and Adhesive or Sealant solids, and can be calculated by the following equation:

$$\text{Grams of VOC per Liter of Adhesive, Less Water and Less Exempt Compounds} = \frac{W_s - W_w - W_{es}}{V_m - V_w - V_{es}}$$

Where:
- W_s = weight of volatile compounds, in grams
- W_w = weight of water, in grams
- W_{es} = weight of exempt compounds, in grams
- V_m = volume of material, in liters
- V_w = volume of water, in liters
- V_{es} = volume of exempt compounds, in liters

For Adhesives or Sealants that contain Reactive Diluents, the VOC content of the Adhesive or Sealant is determined after curing. The grams of VOC per liter of Adhesive or Sealant (except a Low-Solids Adhesive or Sealant) shall be calculated by the following equation:

$$\text{Grams of VOC per Liter of Adhesive, Less Water and Less Exempt Compunds} = \frac{W_{rs} - W_{rw} - W_{res}}{V_{rm} - V_{rw} - V_{res}}$$

Where:
- W_{rs} = weight of volatile compounds not consumed during curing, in grams
- W_{rw} = weight of water not consumed during curing, in grams
- W_{res} = weight of exempt compounds not consumed during curing, in grams
- V_{rm} = volume of material prior to reaction, in liters
- V_{rw} = volume of water not consumed during curing, in liters
- V_{res} = volume of exempt compounds not consumed during curing, in liters

(37) Grams of VOC Per Liter of Material - The weight of VOC per volume of material calculated by the following equation:

$$Grams\ of\ VOC\ per\ Liter\ of\ Material = \frac{W_s - W_w - W_{es}}{V_m}$$

Where: W_S = weight of volatile compounds, in grams
W_W = weight of water, in grams
W_{es} = weight of exempt compounds, in grams
V_m = volume of material, in liters

(38) Hand Application Methods - The application of Adhesive or Sealant by manually held equipment. Such equipment includes paint brush, hand roller, trowel, spatula, dauber, rag, sponges, and mechanically- and/or pneumatic-driven syringes without atomization of the materials.

(39) High-Volume, Low-Pressure (HVLP) Spray - Spray equipment permanently labeled as such and which is designed and operated between 0.1 and 10 pounds per square inch, gauge (psig) air atomizing pressure measured dynamically at the center of the air cap and at the air horns.

(40) Indoor Carpet Adhesive - An Adhesive used during the installation of a carpet that is in an enclosure and is not exposed to ambient weather conditions during normal use.

(41) Light Curable Adhesives and Sealants - Single-component reactive Adhesives and Sealants that cure upon exposure to visible-light, ultra-violet light, or to an electron beam.

(42) Low-Solids Adhesive - An Adhesive which has less than one (1) pound (120 grams) of solids per gallon of material.

(43) Low-Solids Adhesive Primer - An Adhesive Primer which has less than one (1) pound (120 grams) of solids per gallon of material.

(44) Marine Deck Sealant - A Sealant intended by the manufacturer to be applied to wooden marine decks.

(45) Marine Deck Sealant Primer - Any Sealant Primer intended by the manufacturer to be applied to wooden marine decks.

(46) Metal to Urethane/Rubber Molding or Casting Adhesive - Any Adhesive intended by the manufacturer to bond metal to high density or elastomeric urethane or molded Rubber materials, in heater molding or casting processes, to fabricate products such as rollers for computer printers or other paper handling equipment.

(47) Modified Bituminous Materials - Materials obtained from natural deposits of asphalt or residues from the distillation of crude oil petroleum or coal which

consist mainly of hydrocarbons, and include, but are not limited to, asphalt, tar, pitch and asphalt tile that are soluble in carbon disulfide.

(48) Modified Bituminous Sealant Primer - Primer consisting of bituminous materials and a high flash solvent used to prepare a surface by (1) improving the adhesion and (2) absorbing dust from the surface for Adhesive or flashing cement bitumen membrane.

(49) Motor Vehicle Adhesive - An Adhesive, including glass bonding Adhesive, used at a Facility that is not an automobile or light-duty truck assembly coating Facility, applied for the purpose of bonding two (2) vehicle surfaces together without regard for the substrates involved.

(50) Motor Vehicle Glass Bonding Adhesive Primer - A Primer, used at a Facility that is not an automobile or light-duty truck assembly coating Facility, applied to windshield or other glass, or to body openings, to prepare the glass or body opening for the application of glass bonding Adhesives or the installation of Adhesive bonded glass. Motor vehicle glass bonding Primer includes glass bonding/cleaning Primers that perform both functions (cleaning and priming of the windshield or other glass, or body openings) prior to the application of the Adhesive or the installation of Adhesive bonded glass.

(51) Motor Vehicle Weatherstrip Adhesive - An Adhesive, used at a Facility that is not an automobile or light-duty truck assembly coating Facility, applied to weatherstripping materials for the purpose of bonding the weatherstrip material to the surface of the vehicle.

(52) Multipurpose Construction Adhesive - Any Adhesive to be used for the installation or repair of various construction materials, including but not limited to: Drywall, Subfloor, Panel, Fiberglass Reinforced Plastic (FRP), ceiling tile and acoustical tile.

(53) Nonmembrane Roof Sealant - Any Sealant to be used for installation or repair of nonmembrane roofs. This category includes Plastic or asphalt roof cement, asphalt roof coatings, and cold application cement.

(54) Orthotics and Prosthetics - Medical devices designed and fabricated to address human neuromuscular and structural skeletal problems in order to activate, supplement, or replace weakened, atrophied or missing limbs.

(55) Outdoor Carpet Adhesive - An Adhesive used during the installation of carpet that is not in an enclosure and is exposed to ambient weather conditions during normal use.

(56) Panel Adhesive - An Adhesive used for the installation of plywood, pre-decorated hardboard (or tileboard), Fiberglass reinforced plastic (FRP), and similar pre-decorated or non-decorated panels to studs or solid surfaces.

(57) Percent VOC by Weight - The ratio of the weight of the VOC to the weight of the material, expressed as a percentage of VOC by weight. The percent VOC by weight can be calculated as follows:

$$Percent\ VOC\ by\ Weight = \frac{W_v}{W} \times 100$$

Where: W_V = weight of the VOCs, in grams
W = weight of material in grams

(58) Perimeter Bonded Sheet Flooring Installation - Installation of sheet flooring with vinyl backing onto a nonporous substrate using an adhesive designed to be applied only to a strip of up to four (4) inches wide around the perimeter of the sheet flooring.

(59) Person - Any individual, firm, association, organization, partnership, business, trust, corporation, company, contractor, supplier, installer, user or owner, or any state or local governmental agency or public district or any other officer or employee thereof. Person also means the United States or its agencies to the extent authorized by federal law.

(60) Plastic Foam - Foam constructed of Plastics.

(61) Plastics - Synthetic materials chemically formed by the polymerization of organic (carbon-based) substances. Plastics are usually compounded with modifiers, extenders, and/or reinforcers. They are used to produce pipe, solid sheet, film, or bulk products.

(62) Plastic Solvent Welding Adhesive - The use of Adhesives made of resins and solvents which are used to dissolve the surfaces of Plastic, except ABS, CPVC, and PVC Plastic, to form a bond between mating surfaces.

(63) Plastic Solvent Welding Adhesive (ABS) - An Adhesive that is intended by the manufacturer to weld ABS plastic.

(64) Plastic Solvent Welding Adhesive (CPVC) - An Adhesive intended by the manufacturer for welding of chlorinated polyvinyl chloride plastic, and labeled as such.

(65) Plastic Solvent Welding Adhesive Primer - Any Primer intended by the manufacturer for use to prepare Plastic substrates prior to bonding or welding.

(66) Plastic Solvent Welding Adhesive (PVC) - An Adhesive intended by the manufacturer for use in the welding of Polyvinyl Chloride Plastic pipe.

(67) Polyvinyl Chloride (PVC) - Plastic which is a polymer of the chlorinated vinyl monomer that contains 57 percent chlorine and is normally identified with a PVC marking.

(68) Porous Material - A substance which has tiny openings, often microscopic, in which fluids may be absorbed or discharged.

(69) Primer - A material applied to a substrate to improve adhesion of subsequently applied Adhesive.

(70) Reactive Diluent - A liquid which is a VOC during application and one in which, through chemical and/or physical reactions, such as polymerization, 20 percent or more of the VOC becomes an integral part of a finished material.

(71) Reinforced Plastic Composite - Composite material consisting of Plastic reinforced with fibers.

(72) Roadway Sealant - Any Sealant to be applied to public streets, highways, and other surfaces, including but not limited to curbs, berms, driveways, and parking lots.

(73) Roll Coater - A series of mechanical rollers that form a thin coating or Adhesive film on the surface roller, which is applied to a substrate by moving the substrate underneath the roller.

(74) Rubber - Any natural or manmade Rubber substrate, including but not limited to, styrene-butadiene Rubber, polychloroprene (neoprene), butyl Rubber, nitrile Rubber, chlorosulfonated polyethylene and ethylene propylene diene terpolymer.

(75) Rubber Floor Adhesive - The installation of flooring material in which both the back and the top surface are made of synthetic Rubber, and which may be in sheet or tile form.

(76) Sealant - Any material with Adhesive properties that is formulated primarily to fill, seal, or waterproof gaps or joints between two (2) surfaces. Sealants include Sealant Primers and caulks.

(77) Sealant Primer - Any product applied to a substrate, prior to the application of a Sealant, to enhance the bonding surface.

(78) Sheet Rubber Lining Installation Adhesive - The hand application of sheet Rubber lining to metal or Plastic substrates in order to protect the underlying substrate from corrosion or abrasion. These operations also include laminating sheet Rubber to fabric.

(79) Shoe Repair, Luggage and Handbag Adhesive - An Adhesive used to repair worn, torn or otherwise damaged uppers, soles, and heels of shoes, or for making repairs to luggage and handbags.

(80) Single-Ply Roof Membrane Adhesive Primer - Any Primer labeled for use to clean and promote adhesion of the single-ply roof membrane seams or splices prior to bonding.

(81) Single-Ply Roof Membrane Installation/Repair Adhesive - Any Adhesive Sealant to be used for the installation or repair of single-ply roof membrane. Installation includes, but is not limited to attaching the edge of the membrane to the edge of the roof and applying flashings to vents, pipes, or ducts that protrude through the membrane.

(82) Single-Ply Roof Membrane Sealant - Any Sealant to be used for the installation or repair of single-ply roof membrane to the edge of the roof and applying flashings to vents, pipes, or ducts that protrude through the membrane.

(83) Solvent Welding - The softening of the surfaces of two substrates by wetting them with solvents and/or Adhesives, and joining them together with a chemical and/or physical reaction(s) to form a fused union.

(84) South Coast Air Quality Management District (SCAQMD) - The air quality district created pursuant to Division 26, Part 3, Chapter 5.5 of the California Health & Safety Code (commencing with §40400).

(85) Space Vehicle - A vehicle designed to travel beyond Earth's atmosphere.

(86) Special Purpose Contact Adhesive - A Contact Adhesive that is used to bond all of the following substrates to any surface: melamine covered board, metal, unsupported vinyl, Teflon, ultra-high molecular weight polyethylene, Rubber and wood veneer 1/16 inch or less in thickness.

(87) Structural Glazing Adhesive - Any Adhesive to be used to adhere glass, ceramic, metal, stone, or composite panels to exterior building frames.

(88) Structural Wood Member Adhesive - An Adhesive used for the construction of any load bearing joints in wooden joists, trusses, or beams.

(89) Subfloor Adhesive - An Adhesive used in the installation of subflooring material over floor joists.

(90) Thin Metal Laminating Adhesive - A process of bonding multiple layers of metal to metal or metal to Plastic in the production of electronic or magnetic components in which the thickness of the bond line(s) is less than 0.25 mil.

(91) Tire Repair Adhesive - The expanding of a hole, tear, fissure, or blemish in a tire casing by grinding or gouging, applying Adhesive, and filling the hole or crevice with Rubber.

(92) Tire Retread Adhesive - Any Adhesive to be applied to the back of pre-cured tread Rubber and to the casing and cushion Rubber, or to be used to seal buffed tire casings to prevent oxidation while the tire is being prepared for a new tread.

(93) Top and Trim Adhesive - An Adhesive used during the installation of automotive and marine trim, including, but not limited to, headliners, vinyl tops, vinyl trim, sunroofs, dash covering, door covering, floor covering, panel covering and upholstery.

(94) Traffic Marking Tape - Preformed reflective tape to be applied to public streets, highways, and other surfaces, including but not limited to curbs, berms, driveways, and parking lots.

(95) Traffic Marking Tape Adhesive Primer - Any Adhesive Primer intended by the manufacturer to be applied to surfaces prior to installation of Traffic Marking Tape.

(96) Transfer Efficiency - The ratio of the weight or volume of Coating Solids adhering to an object to the total weight or volume, respectively, of Coating Solids used in the application process, expressed as a percentage.

(97) United States Environmental Protection Agency (USEPA) - The United States Environmental Protection Agency, the Administrator of the USEPA and his or her authorized representative.

(98) Vinyl Composition Tile (VCT) and Asphalt Tile Adhesive - An Adhesive intended by the manufacturer for the installation of vinyl composite tile or asphalt tile flooring made from thermoplastic resins, fillers and pigments.

(99) Viscosity - The internal friction of a liquid that makes it resistant to flow.

(100) Volatile Organic Compound (VOC) - Any compound of carbon, excluding carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates, and ammonium carbonate, which participates in atmospheric photochemical reactions and those compounds listed in 40 CFR 51.100(s).

(101) Waterproof Resorcinol Glue - A two-part resorcinol-resin-based Adhesive designed for applications where the bond line must be resistant to continuous immersion in fresh or salt water.

(102) Wood Flooring Adhesive - An Adhesive used to install a wood floor surface, which may be in the form of Parquet tiles, Planks, or strip-wood.

(103) Wood Parquet Flooring - Wood flooring in tile form constructed of smaller pieces of wood which are joined together in a pattern by the maker to form the tile.

(104) Wood Plank Flooring - Solid or laminated wood in plank form.

(C) Requirements

(1) After January 1, 1993, a Person shall not apply any Adhesives, Sealants, Adhesive Bonding Primers, Adhesive Primers, Sealant Primers, or any other Primer which have a VOC content in excess of 250 g/L less water and less Exempt Compounds unless otherwise specified in subsection (C)(2).

(2) After September 20, 2011, a Person shall not apply Adhesives, Adhesive Primers, Sealants, Sealant Primers, or any other Primer which have a VOC content in excess of the limits specified in Table 1:

Table 1

	VOC Emission Limit Less Water and Less Exempt Compounds	
General Adhesive Application Processes*	Proposed Limits in g/L	Proposed Limits in lb/gal
Fiberglass	80	0.7
Flexible Vinyl	250	2.1
Floor Covering Installation (Indoor)	150	1.3
Floor Covering Installation (Outdoor)	250	2.1
Metal	30	0.3
Plastic Foams	50	0.4
Porous Material (Except Wood)	50	0.4
Reinforced Plastic Composite	200	1.7
Rubber	250	2.1
Wood	30	0.3
Other Substrates	250	2.1
Specialty Adhesive Application Processes		
Carpet Pad	50	0.4
Ceramic Tile Installation	65	0.5
Computer Diskette Manufacturing	350	2.9
Contact Adhesive	80	0.7
Cove Base Installation	50	0.4
Drywall and Panel	50	0.4
Indoor Carpet	50	0.4
Metal to Urethane/Rubber Molding or Casting	850	7.1
Motor Vehicle	250	2.1
Motor Vehicle Weatherstrip	750	6.3
Multipurpose Construction	70	0.6
Outdoor Carpet	150	1.3
Perimeter Bonded Sheet Vinyl	660	5.5
Plastic Solvent Welding (except ABS, CPVC, and PVC)	250	2.1
Plastic Solvent Welding (ABS)	325	2.7
Plastic Solvent Welding (CPVC)	490	4.1
Plastic Solvent Welding (PVC)	510	4.3
Rubber Floor	60	0.5
Sheet Rubber Lining Installation	850	7.1
Single-Ply Roof Membrane Installation/Repair	250	2.1
Special Purpose Contact Adhesive	250	2.1
Structural Glazing	100	0.8
Structural Wood Member	140	1.7
Subfloor	50	0.4
Thin Metal Laminating	780	6.5
Tire Repair/Retread	100	0.8
Top and Trim	250	2.1
VCT and Asphalt Tile	50	0.4
Waterproof Resorcinol Glue	170	1.4
Wood Flooring	100	0.8

Adhesive Primer Application Processes		
Motor Vehicle Glass Bonding	900	7.5
Plastic Solvent Welding	550	4.6
Single-Ply Membrane	250	2.1
Traffic Marking Tape	150	1.3
Other Adhesive Primer	250	2.1
Sealant Primers		
Architectural - Non Porous	250	2.1
Architectural - Porous	775	6.5
Modified Bituminous	500	4.2
Marine Deck	760	6.3
Other Sealant Primer	750	6.3
Sealants		
Architectural	250	2.1
Marine Deck	760	6.3
Nonmembrane Roof	300	2.5
Roadway	250	2.1
Single-Ply Roof Membrane	450	3.8
Other Sealant	420	3.5

*General adhesive application processes are those not specifically identified in other categories listed below.

If an Adhesive is used to bond dissimilar substrates together the Adhesive with the highest VOC content shall be allowed.

(3) Containers used to dispose of VOC-laden cloth or paper used in stripping cured Adhesives or Sealants shall be closed except when depositing or removing VOC-laden cloth or paper from the container.

(4) Solvent Cleaning Operations: Storage and disposal of VOC-containing materials shall be conducted in accordance with the provisions of District Rule 1171 - *Solvent Cleaning Operations*.

(5) Transfer Efficiency

A Person shall not apply Adhesives or Sealants unless the Adhesive or Sealant is applied with properly operating equipment in accordance with operating procedures specified by either the equipment manufacturer or the APCO. Application of Adhesives shall be accomplished only by the use of one (1) of the following methods:

(a) Electrostatic application;

(b) Flow coat;

(c) Dip coat;

(d) Roll Coater;

(e) HVLP spray;

(f) Hand Application Methods;

(g) Such other Adhesive application methods as are demonstrated to the APCO Officer to be capable of achieving no less efficiency than HVLP method and for which prior written approval of the APCO has been obtained; or

(h) For Adhesives with a Viscosity of 200 centipoise or greater, as applied, airless spray, air-assisted airless spray, and air-atomized spray may also be used.

(6) A Person may comply with the provisions of subsections (C)(1), (C)(2), or (C)(5), or all three, by using approved air pollution control equipment, provided that the VOC emissions from such operations and/or materials are reduced by 85 percent overall, by weight.

(7) A Person may comply with the provisions of subsection (C)(1) and subsection (C)(2) by means of an Alternative Emission Control Plan pursuant to District Rule 108 - *Alternative Emission Control Plans*.

(8) If anywhere on the container of any Adhesive or Sealant, on any sticker or label affixed thereto, or in any sales or advertising literature, any representation is made that the Adhesive or Sealant may be used for any other source specific rule application, for which there is a lower VOC standard, the lowest VOC standard shall apply.

(9) The VOC content of Adhesives and Sealants that are applied with the use of refillable pressurized containers are subject to the VOC limits of this rule.

(D) Recordkeeping Requirements

Notwithstanding provisions of Section (I), records shall be maintained pursuant to District Rule 109 – *Recordkeeping for Volatile Organic Compound Emissions*.

(E) Methods of Analysis

(1) The VOC content of cleaning materials and Adhesives or Sealants shall be determined by using USEPA Reference Method 24 (Determination of Volatile Matter Content, Water Content, Density Volume Solids, and Weight Solids of Surface Coating, 40 CFR Part 60, Appendix A, utilizing Procedure B of ASTM Method D2369), or the SCAQMD Method 304.

(2) The Exempt Compound's content shall be determined by Methods 302 and 303 in SCAQMD's "Laboratory Methods of Analysis for Enforcement Samples" or ASTM Method D4475-85.

(3) The VOC content of PVC, CPVC, and ABS pipe cements, Adhesive Primer for Plastic shall be determined by Method 316A in SCAQMD's "Laboratory Method of Analysis for Enforcement Samples."

(4) The VOC content of cyanoacrylate Adhesives shall be determined by Method 316B in SCAQMD's "Laboratory Methods of Analysis for Enforcement Samples."

(F) Test Methods

(1) The efficiency of the control device and the VOC content measured and calculated as carbon in the control device exhaust gases shall be determined by USEPA's Test Method 18, or CARB Method 422 for the determination of emissions of Exempt Compounds and USEPA's Test Methods 25, 25A; or SCAQMD's Method 25.1 or Method 25.3 (Determination of Total Gaseous Non-Methane Organic Emissions as Carbon) for the determination of total organic compound emissions. Emissions determined to exceed any limits established by this rule through the use of any of the above-referenced test methods shall constitute a violation of the rule.

(2) Viscosity will be determined by ASTM D 1084-88.

(3) The following classes of 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 sulfur bonds only to carbon and fluorine, will be analyzed as Exempt Compounds for compliance with Section (C), only at such time as manufacturers specify which individual compounds are used in the coating formulations and identify the test methods, which, prior to such analysis, have been approved by the USEPA, that can be used to quantify the amounts of each Exempt Compound.

(G) Prohibition of Specifications

(1) A Person shall not solicit or require any other Person to use, in the District, any Adhesives, Sealants or combination of Adhesives or Sealants in violation of the requirements of this rule.

(2) The requirements of this Section shall apply to all written or oral agreements executed or entered into after July 1, 1989.

(H) Prohibition of Sales and Use

(1) On and after September 20, 2011, except as provided in Section (J), or subsection (3) below, no Person shall use, supply, sell, or offer for sale an Adhesive, Sealant, or Adhesive or Sealant Primer for use in the District that at the time of sale exceeds the applicable VOC limits specified in subsections (C)(1) and (C)(2).

(2) On and after September 20, 2011, except as provided in subsection (3) below, no Person shall use, supply, sell, or offer for sale an Adhesive, Sealant, or Adhesive or Sealant Primer for use in the District that contains chloroform, ethylene dichloride, methylene chloride, perchloroethylene, or trichloroethylene.

(3) The prohibition of sales and use as specified in subsections (H)(1) and (H)(2) shall not apply to the following:

(a) Adhesives and Sealants shipped, supplied or sold to Persons for use outside the District;

(b) Any manufacturer of Adhesives or Sealants, provided that the manufacturer has complied with the labeling requirements of District Rule 443.1 – *Labeling of Materials Containing Organic Solvents*, and the product is not sold directly to a user located in the District, or the product was sold to an independent distributor or a sales outlet located in the District that is not a subsidiary of, or under the control of the manufacturer, and was informed in writing by the manufacturer about the compliance status of the product with this rule; and

(c) Adhesives and Sealants that contain less than one (1) percent by weight of methylene chloride.

(I) Rule 442 Applicability

(1) Any Adhesive, Sealant, Adhesive or Sealant application, operation, or Person which is exempt from all or a portion of this rule, shall comply with the applicable provisions of District Rule 442 – *Usage of Solvents*.

(J) Exemptions

(1) The provisions of subsection (C)(1) and subsection (C)(2) shall not apply to the following:

(a) Adhesives used in Tire Repair; or

(b) Adhesives and/or Adhesive application processes that are subject to the provisions of District Rules 1104, 1124, 1128, 1130 and 1130.1.

(2) The provisions of this rule shall not apply to Aerospace Components that are subject to the provisions of District Rule 1124.

(3) The provisions of subsection (C)(5) and Section (D) shall not be applied to the application of Adhesives or Sealants that contain less than 20 g/L of VOC per liter of Adhesives or Sealants, less water and less Exempt Compounds.

(4) The provisions of this rule shall not apply to any Facility that uses less than one (1) pint of Adhesives in any one (1) day so long as the products were purchased prior to September 20, 2011.

(5) The provisions of Section (C) shall not apply to research and development programs and quality assurance labs provided that:

(a) A record is kept of:

(i) The date when the Adhesives are used, and the type of application(s);
(ii) The amount of Adhesives used and the VOC content of such Adhesives;
(iii) The amount of solvents used and VOC content of such solvents; and
(iv) The manufacturer/suppliers identification and type of material.

(b) Such records shall be retained in accordance with the provisions of Section (D) of this rule.

(6) The provisions of subsection (C)(1) and subsection (C)(2) shall not apply to a Facility that demonstrates that the total volume of non-compliant Adhesives, Sealants, Adhesive Primers, Sealant Primers, and Adhesive Bonding Primers is less than 55 gallons per Facility per rolling 12 month period. On or after January 19, 2009, a Facility may not use this subsection to exclude non-compliant Adhesives used in Architectural Applications, Contact Adhesives, Special Purpose Contact Adhesives and Adhesives used on Porous substrates.

(7) The provisions of Section (C) shall not apply to Solvent Welding operations used in the manufacturing of medical devices.

(8) The provisions of this rule shall not apply to Aerosol Adhesives and Primers dispensed from Aerosol Spray Cans. These products must comply with the CARB consumer product regulation found in Title 17 of the California Code of Regulations, beginning at §94507.

(9) The provisions of subsection (C)(1) and subsection (C)(2) shall not apply to any Adhesive used exclusively for Thin Metal Laminating operations, provided that the Adhesive contains less than 780 grams of VOC per liter of Adhesive, less water and less Exempt Compounds, as applied, and the Facility uses a total of three (3) gallons per day or less of these Adhesives.

(10) The provisions of this rule, except subsection (H)(2) and Section (D), shall not apply to Light Curable Adhesives and Sealants with a VOC content no more than 50 grams per liter, less water and less Exempt Compounds.

(11) The provisions of this rule, except subsection (H)(2), shall not apply to the use of Cyanoacrylate Adhesives.

(12) The provisions of this rule shall not apply to Adhesives and Sealants subject to the CARB consumer products regulation found in Title 17 of the California Code of Regulations, beginning at §94507.

(13) A Person may sell or apply a non-complying VOC-containing or methylene chloride-containing product for one (1) year after the effective date in subsection (C)(2) for VOC-containing Adhesives and Sealants, and for one year after the applicable effective date of subsection (H)(2), provided:

(a) The product complies with the previous applicable VOC limit,

(b) The product was manufactured prior to the effective date, and

(c) The date of manufacture or a code indicating that date is clearly displayed on the product.

(14) The provisions of this rule, except subsection (H)(2), shall not apply to Adhesives used to fabricate Orthotics and Prosthetics under a medical doctor's prescription.

(15) The provisions of this rule, except subsection (H)(2), shall not apply to Shoe Repair, Luggage, and Handbag Adhesives.

See SIP Table at http://www.avaqmd.ca.gov/Modules/ShowDocument.aspx?documentid=921

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(Adopted: 08/02/91; **Amended:** 05/12/95;
Amended: 09/13/96; **Amended:** 06/13/97;
Amended: 11/17/98)

Rule 1171
Solvent Cleaning Operations

(A) General

(1) Purpose

(a) The purpose of this rule is to reduce emissions of volatile organic compounds (VOCs) and stratospheric ozone-depleting or global-warming compounds from Solvent Cleaning operations and activities, and from the storage and disposal of these materials used in Solvent Cleaning.

(2) Applicability

(b) This rule applies to all Persons who use VOC-containing materials in Solvent Cleaning operations during the production, repair, maintenance, or servicing of parts, products, tools, machinery, equipment, or general work areas, and to all Persons who store and dispose of VOC-containing materials used in Solvent Cleaning.

(B) Definitions

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

(1) Aerosol Product: - a hand-held, nonrefillable container which expels pressurized product by means of a propellant-induced force.

(2) Air Pollution Control Officer (APCO): - the person appointed to the position of Air Pollution Control Officer of the District pursuant to the provisions of the California Health & Safety Code §40750, and his or her designee.

(3) Application Equipment: - a device used to apply adhesive, coating, ink, or polyester resin materials.

(4) Cured Coatings, Cured Inks, and Cured Adhesives: - coatings, inks, and adhesives which are dry to the touch.

(5) Electrical Apparatus Components: - all internal components such as wires, windings, stators, rotors, magnets, contacts, relays, energizers, and connections in apparatus that generates or transmits electrical energy including generators, transformers, and electric motors.

(6) Electronic Components: - all portions of an assembly, including circuit card assemblies, printed wire assemblies, printed circuit boards, soldered joints, ground wires, bus bars, and other electrical fixtures, except for the actual cabinet in which the components are housed.

(7) Exempt Compounds: - those compounds listed in 40 CFR 51.100(S)(1).

(8) Facility: - a business or businesses engaged in solvent cleaning operations which are owned or operated by the same Person or Persons and are located on the same or contiguous parcels.

(9) Flexographic Printing: - the method in which the image area is raised relative to the nonimage area and utilizes flexible rubber or other elastomeric plate and rapid drying liquid inks.

(10) Grams Of Voc Per Liter Of Material: - the weight of VOC per volume of material and can be calculated by the following equation:

$$\text{Grams of VOC per liter of material} = \frac{W_s - W_w - W_{es}}{V_m}$$

Where:

Ws	=	Weight of volatile compounds in grams
Ww	=	Weight of water in grams
Wes	=	Weight of Exempt Compounds in grams
Vm	=	Volume of material in liters

(11) Graphic Arts: - all Gravure, Letterpress, Flexographic, and Lithographic Printing processes.

(12) Gravure Printing: - an intaglio process in which the ink is carried in minute etched or engraved wells on a roll or cylinder. The excess ink is removed from the surface by a doctor blade.

(13) High Precision Optics: - optical elements used in electro-optical devices which are designed to sense, detect, or transmit light energy, including specific wavelengths of light energy and changes in light energy levels.

(14) Institutional Cleaning: - cleaning activities conducted at organizations, societies, or corporations including, but not limited to schools, hospitals, sanitariums, and prisons.

(15) Janitorial Cleaning: - the cleaning of building or Facility components, such as the floors, ceilings, walls, windows, doors, stairs, bathrooms, etc.

(16) Letterpress Printing - the method in which the image area is raised relative to the nonimage area and the ink is transferred to the paper directly from the image surface.

(17) Liquid Leak: - the visible liquid solvent leak from the container at a rate of more than three (3) drops per minute, or a visible liquid mist.

(18) Liquid-Tight Food Container: - a paperboard container that can hold liquid food and food products without leaking even when it is held upside-down.

(19) Lithographic Printing: - a plane-o-graphic method in which the image and nonimage areas are on the same plane.

(20) Maintenance Cleaning: - a Solvent Cleaning operation or activity carried out to keep tools, machinery, equipment excluding Application Equipment, or general work areas in clean and good operational condition.

(21) Manufacturing Process: - the process of making goods or articles by hand or by machinery.

(22) Medical Device: - an instrument, apparatus, implement, machine, contrivance, implant, in vitro reagent or other similar article, including any component or accessory, that meets one of the following conditions:

(a) it is intended for use in the diagnosis of disease or other conditions, or in the cure, mitigation, treatment, or prevention of disease; or

(b) it is intended to affect the structure or any function of the body; or

(c) it is defined in the National Formulary or the United States Pharmacopeia, or any supplement to them.

(23) Non-Absorbent Containers: - containers made of nonporous material which do not allow the migration of the liquid Solvent through them.

(24) Non-Atomized Solvent Flow: - the use of a solvent in the form of a liquid stream without atomization to remove uncured adhesives, uncured inks, uncured coatings, and contaminants from an article.

(25) Non-Leaking Containers: - containers without Liquid Leaks.

(26) Person: - any firm, business establishment, association, partnership, corporation or individual, whether acting as principal, agent, employee, or other capacity including any governmental entity or charitable organization.

(27) Printing: - in the Graphic Arts is any operation that imparts color, design, alphabet, or numerals on a substrate.

(28) Remote Reservoir Cleaner: - a cleaning device in which liquid solvent is pumped from a solvent container to a sink-like work area and the solvent from the sink-like area drains into an enclosed solvent container while parts are being cleaned.

(29) Repair Cleaning: - a Solvent Cleaning operation or activity carried out during a Repair Process.

(30) Repair Process: - the process of returning a damaged object or an object not operating properly to good condition.

(31) Scientific Instruments: - instruments (including the components, assemblies, and subassemblies used in their manufacture) and associated accessories and reagents which are used for the detection, measurement, analysis, separation, synthesis, or sequencing of various compounds.

(32) Screen Printing: - a process in which the Printing ink passes through a web or a fabric to which a refined form of stencil has been applied. The stencil openings determine the form and dimensions of the imprint.

(33) Solvent: - a VOC-containing liquid used to perform Solvent Cleaning.

(34) Solvent Cleaning: - the removal of loosely held uncured adhesives, uncured inks, uncured coatings, and contaminants which include, but are not limited to, dirt, soil, and grease from parts, products, tools, machinery, equipment, and general work areas. Each distinct method of cleaning in a cleaning process which consists of a series of cleaning methods, shall constitute a separate Solvent Cleaning operation.

(35) Solvent Flushing: - the use of a Solvent to remove uncured adhesives, uncured inks, uncured coatings, or contaminants from the internal surfaces and passages of the equipment by flushing Solvent through the equipment.

(36) Specialty Flexographic Printing: - Flexographic Printing on polyethylene or polypropylene food packaging, fertilizer bags, or Liquid-Tight Food Containers.

(37) Sterilization Indicating Inks: - inks that change color to indicate that sterilization has occurred. Such inks are used to monitor the sterilization of medical instruments, autoclave efficiency, and the thermal processing of foods for prevention of spoilage.

(38) Stripping: - the removal of Cured Coatings, Cured Inks, and Cured Adhesives.

(39) Surface Preparation: - the removal of contaminants such as dust, soil, oil, grease, etc., prior to coating, adhesive, or ink applications.

(40) Ultraviolet Inks: - inks which dry by polymerization reaction induced by ultraviolet energy.

(41) United States Environmental Protection Agency (USEPA): the United States Environmental Protection Agency, the Administrator of the USEPA and his or her authorized representative.

(42) VOC Composite Partial Pressure: - the sum of the partial pressures of the compounds defined as VOCs. VOC Composite Partial Pressure is calculated as follows:

$$PPc = \sum_{i=1} \frac{\frac{(Wi)(VPi)}{MWi}}{\frac{Ww}{MWw} + \frac{We}{MWe} + \sum_{i=1}^{n} \frac{Wi}{MWi}}$$

Where:

W_i	=	Weight of the "i"th VOC compound, in grams
W_w	=	Weight of water in grams
W_e	=	Weight of exempt compound, in grams
MW_i	=	Molecular weight of the "i"th VOC compound, in grams per gram-mole
MW_w	=	Molecular weight of water, in grams per gram-mole
MW_e	=	Molecular weight of exempt compound, in grams per gram-mole
PP_c	=	VOC Composite Partial Pressure at 20°C, in mm Hg
VP_i	=	Vapor pressure of the "i"th VOC compound at 20°C, in mm Hg

(43) Volatile Organic Compound (VOC): - any volatile compound of carbon, excluding methane, carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates, ammonium carbonate, and Exempt Compounds. -

(44) Wipe Cleaning: - the method of cleaning a surface by physically rubbing it with a material such as a rag, paper, sponge or a cotton swab moistened with a Solvent.

(C) Requirements

(1) Solvent Requirements

(a) A Person shall not use a Solvent to perform Solvent Cleaning unless the Solvent complies with the applicable requirements set forth below:

SOLVENT CLEANING ACTIVITY		CURRENT LIMITS		Effective 1/1/1997		Effective 1/1/1999	
		VOC g/l (lb/gal)	VOC Composite Partial Pressure mm Hg @ 20°C (68°F)	VOC g/l (lb/gal)	VOC Composite Partial Pressure mm Hg @ 20°C (68°F)	VOC g/l (lb/gal)	VOC Composite Partial Pressure mm Hg @ 20°C (68°F)
(i)	Product Cleaning During Manufacturing Process Or Surface Preparation For Coating, Adhesive, Or Ink Application						
	1. General	70 (0.58)					
	2. Electronic Components or Medical Devices	900 (7.5)	33				
(ii)	Repair and Maintenance Cleaning						
	1. General	900 (7.5)	20				
	2. Electrical Apparatus Components	900 (7.5)	20				
	3. Medical Devices	900 (7.5)	33				
(iii)	Cleaning of Coatings, or Adhesives Application Equipment	950 (7.9)	35				
(iv)	Cleaning of Ink Application Equipment						
	1. General	100 (0.83)	3				
	2. Flexographic or Gravure Printing	100 (0.83)	3				
	3. Lithographic or Letter Press Printing	900 (7.5)	25				10
	4. Screen Printing	1070 (8.9)	5				
	5. Ultraviolet Inks (except Screen Printing)	800 (6.7)	33				
	6. Specialty Flexographic Printing	810 (6.8)	21				
(v)	Cleaning of Polyester Resin Application Equipment	200 (1.7)		50 (0.42)			
or			1				

(2) Cleaning Devices and Methods Requirements

(a) A Person shall not perform Solvent Cleaning unless one of the following cleaning devices or methods is used:

(i) Wipe Cleaning;

(ii) Closed containers or hand held spray bottles from which Solvents are applied without a propellant-induced force;

(iii) Cleaning equipment which has a Solvent container that can be, and is closed during cleaning operations, except when depositing and removing objects to be cleaned, and is closed during nonoperation with the exception of maintenance and repair to the cleaning equipment itself;

(iv) Remote Reservoir Cleaner used pursuant to the provisions of subsection (C)(3);

(v) Non-Atomized Solvent Flow method where the cleaning Solvent is collected in a container or a collection system which is closed except for Solvent collection openings and, if necessary, openings to avoid excessive pressure build-up inside the container; or

(vi) Solvent Flushing method where the cleaning Solvent is discharged into a container which is closed except for Solvent collection openings and, if necessary, openings to avoid excessive pressure build-up inside the container. The discharged Solvent from the equipment must be collected into containers without atomizing into the open air. The Solvent may be flushed through the system by air or hydraulic pressure, or by pumping.

(3) Remote Reservoir Cleaners

(a) Regardless of Rule 1122 requirements, any Person owning or operating a Remote Reservoir Cleaner shall comply with all of the following requirements in addition to the VOC limits for Repair and Maintenance Cleaning specified in clause (C)(1)(a)(ii):

(i) Prevent Solvent vapors from escaping from the Solvent container by using such devices as a cover or a valve when the remote reservoir is not being used, cleaned, or repaired;

(ii) Direct Solvent flow in a manner that will prevent liquid Solvent from splashing outside of the Remote Reservoir Cleaner;

(iii) Do not clean porous or absorbent materials, such as cloth, leather, wood, or rope; and

(iv) Use only Solvent containers free of all Liquid Leaks. Auxiliary equipment, such as pumps, pipelines, or flanges, shall not have any Liquid Leaks, visible tears, or cracks. Any Liquid Leak, visible tear, or crack detected shall be repaired within one (1) calendar day, or the leaking section of the remote reservoir cold cleaner shall be drained of all Solvent and shut down until it is replaced or repaired.

(4) Storage and Disposal

(a) All VOC-containing Solvents, used in Solvent Cleaning operations, shall be stored in non-absorbent, Non-Leaking Containers which shall be kept closed at all times except when filling or emptying. It is recommended that cloth and paper moistened with VOC-containing Solvents be stored in closed, non-absorbent, Non-Leaking Containers.

(5) Control Equipment

(a) In lieu of complying with the requirements in paragraphs (C)(1)(a) or (c)(2), a Person may comply by using a VOC emission collection and control system in association with the Solvent Cleaning operation provided:

(i) the emission control system shall collect at least ninety percent (90%), by weight, of the emissions generated by the Solvent Cleaning operation; and

1. have a destruction efficiency of at least 95 percent, by weight, or

2. have an output of less than 50 parts per million (PPM) calculated as carbon with no dilution; or

(ii) the emission control system meets the requirements of the applicable source specific rule of the District's Regulation XI. The collection system for cleaning in Graphic Arts and Screen Printing and cleaning of Application Equipment used for Graphic Arts materials and Screen Printing materials, shall collect at least 70

percent, by weight, of the emissions generated. This control system shall reduce emissions from the emission collection system by at least 95 percent.

(6) Recordkeeping Requirements

(a) Records shall be maintained pursuant to Rule 109 for all applications subject to this rule, including those exempted under section (G), except the following:

(i) Facilities not subject to recordkeeping requirements from any other Regulation XI rules.

(ii) Cleaning performed with a Solvent which has a water content of 98 percent or more, by weight, or a VOC Composite Partial Pressure of 0.1 mm Hg or less at 20°C (68°F), or contains VOC consisting of more than 12 carbon atoms.

(D) General Prohibitions

(1) A Person shall not atomize any Solvent unless it is vented to air pollution control equipment which meets the requirements of subsection (C)(5).

(2) A Person shall not specify or require any Person to use Solvent or equipment subject to the provisions of this rule that does not meet the requirements of this rule.

(3) On and after January 1, 1997, a Person shall not perform Solvent Cleaning activities or operations subject to the provisions of this rule with any material which contains any of the following compounds: 1,1,1-trichloroethane (methyl chloroform); trichlorofluoromethane (CFC-11); dichlorodifluoromethane (CFC-12); 1,1,2-trichloro-1,2,2-trifluoroethane (CFC-113); 1,2-dichloro-1,1,2,2-tetrafluoroethane (CFC-114); chloropentafluoroethane (CFC-115); ethylfluoride (HFC-161); 1,1,1,3,3,3-hexafluoropropane (HFC-236fa); 1,1,2,2,3-pentafluoropropane (HFC-245ca); 1,1,2,3,3-pentafluoropropane (HFC-245ea); 1,1,1,2,3-pentafluoropropane (HFC-245eb); 1,1,1,3,3-pentafluoropropane (HFC-245fa); 1,1,1,2,3,3-hexafluoropropane (HFC-236ea); 1,1,1,3,3-pentafluorobutane (HFC-365mfc); chlorofluoromethane (HCFC-31); 1-chloro-1-fluoroethane (HCFC-151a); or 1,2-dichloro-1,1,2-trifluoroethane (HCFC-123a).

(E) Test Methods

(1) For the purpose of this rule, the following test methods shall be used. Other test methods determined to be equivalent after review by the staffs of the District, the Air Resources Board, and the USEPA, and approved in writing by the APCO may also be used.

(a) The VOC content of materials subject to the provisions of this rule shall be determined by the following methods:

(i) USEPA Reference Method 24 (Code of Federal Regulations, Title 40, Part 60, Appendix A). The Exempt Compounds' content shall be determined by the South Coast Air Quality Management District's (SCAQMD) Method 303 (Determination of Exempt Compounds) contained in the SCAQMD "Laboratory Methods of Analysis for Enforcement Samples" manual; or,

(ii) SCAQMD Method 304 [Determination of Volatile Organic Compounds (VOC) in Various Materials] contained in the SCAQMD "Laboratory Methods of Analysis for Enforcement Samples" manual.

(b) Exempt Perfluorocarbon Compounds

(i) The following classes of compounds will be analyzed as Exempt Compounds for compliance with Section (C), only when manufacturers specify which individual compounds are used in the Solvent formulation and identify the USEPA, California Air Resources Board, and other USEPA-approved test methods used to quantify the amount of each exempt compound:

1. cyclic, branched, or linear, completely fluorinated alkanes;

2. cyclic, branched, or linear, completely fluorinated ethers with no unsaturations;

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

4. sulfur-containing perfluorocarbons with no unsaturations and with sulfur bonds only to carbon and fluorine.

(c) Determination of VOC Composite Partial Pressure

(i) The identity and quantity of components in Solvents shall be determined by ASTM Method D323-94. The VOC Composite Partial Pressure is calculated using the equation in subsection (B)(42) of this rule.

(d) Determination of Presence of VOC in Cleaning Materials

(i) The presence of VOC in liquid cleaning materials shall be determined by SCAQMD Method 308 (Quantitation of Compounds by Gas Chromatography) contained in the SCAQMD "Laboratory Methods of Analysis for Enforcement Samples" manual.

(e) Determination of Efficiency of Emission Control System

(i) The efficiency of the collection device of the emission control system as specified in subsection (C)(5)(a)(i) shall be determined by the USEPA method cited in USEPA's publication entitled "Guidelines for Determining Capture Efficiency", January 9, 1995, in conjunction with USEPA Method 204, 204A, 204B, 204C, 204D, 204E or 204F, as appropriate, or any other alternative method approved by USEPA, the California Air Resources Board, and the District.

(ii) The efficiency of the control device of the emission control system as specified in subsection (C)(5)(a)(i) and the VOC content in the control device exhaust gases, measured and calculated as carbon, shall be determined by USEPA Test Method 25 or 25A, as applicable. USEPA Test Method 18, or ARB Method 422 shall be used to determine emissions of Exempt Compounds.

(f) Multiple Test Methods

(i) When more than one test method or set of test methods is specified for any testing, a violation of any requirement of this rule established by any one of the specified test methods or set of test methods shall constitute a violation of this rule.

(g) Unless otherwise specified, all test methods referenced in this section shall be the most recently approved version.

(F) Rule 442 Applicability

Any Solvent, Solvent Cleaning activity, Solvent Cleaning unit operation, or Person, which is exempt from all or a portion of this rule except subsection (C)(6), shall be subject to the applicable requirements of the applicable Regulation XI source specific rule or Rule 442 - Usage of Solvent.

(G) Exemptions

(1) The following Solvent Cleaning operations or activities are not subject to any provision of this rule:

(a) Cleaning carried out in batch-loaded cold cleaners, open-top vapor degreasers, conveyorized degreasers, or film cleaning machines which are regulated under Rule 1122 - Solvent Degreasers.

(b) Cleaning operations subject to Rules 1102 - Petroleum Solvent Dry Cleaners, and 1421 - Control of Perchloroethylene Emissions from Dry Cleaning Operations.

(c) Cleaning operations subject to Rule 1164 - Semiconductor Manufacturing.

(d) Cleaning operations subject to Rule 1124 - Aerospace Assembly and Component Manufacturing Operations, except coating Application Equipment cleaning, and storage and disposal of VOC-containing materials used in Solvent Cleaning operations.

(e) Cleaning operations subject to Rule 1141 - Control of Volatile Organic Compound Emissions from Resin Manufacturing, and Rule 1141.1 - Coatings and Ink Manufacturing.

(f) Janitorial and Institutional cleaning, including graffiti removal.

(g) Stripping of Cured Coatings, Cured Adhesives, and Cured Inks.

(h) Cleaning operations using Solvents with a water content of 98% or more, by weight.

(2) The provisions of subsection (C)(1)(a) shall not apply when carried out for any of the following applications:

(a) Cleaning of solar cells, laser hardware, Scientific Instruments, and High Precision Optics.

(b) Cleaning for: conducting performance laboratory tests on coatings, adhesives, or inks; research and development programs; and laboratory tests in quality assurance laboratories.

(c) Cleaning of polycarbonate plastics.

(3) Cleaning of the nozzle tips of automated spray equipment systems, except for robotic systems, and cleaning with spray bottles or containers described in subsection (C)(2)(a)(ii), are not subject to the provisions of subsection (D)(1).

(4) Cleaning with Aerosol Products shall not be subject to the provisions of subsections (C)(1)(a) and (D)(1) if 160 fluid ounces or less of Aerosol Product are used per day, per Facility.

(5) Cleaning of cotton swabs to remove cottonseed oil before cleaning of high-precision optics shall not be subject to subsection (C)(1)(a).

(6) Medical Device and pharmaceutical facilities may use up to 1.5 gallons per day of Solvents that are not in compliance with subsection (C)(1)(a).

(7) The provisions of subsection (C)(1)(a)(iii) shall not apply to cleaning of coating and adhesive application processes utilized to manufacture transdermal drug delivery product using less than 3 gallons per day of ethyl acetate averaged over a 30 calendar day period.

(8) The provisions of subsection (C)(1)(a)(iv) shall not apply to Persons or Facilities using less than 1.5 gallons per day of solvents to clean Sterilization Indicating Ink Application Equipment.

[SIP: Submitted as amended 11/17/98 on _____; Submitted as amended 06/13/97 on _____; Submitted as amended 09/13/96 on 11/01/96; Approved 07/14/95, 60 FR 36230, 40 CFR 52.220(c)(222)(i)(A)(1); Approved 12/20/93, 58 FR 66285, 40 CFR 52.220(c)(188)(i)(c)(1)]

(**Adopted**: 07/07/89; **Amended**: 12/07/90; **Amended**: 05/13/94; **Amended**: 06/17/08)

RULE 1173
Fugitive Emissions of Volatile Organic Compounds

(A) General

(1) Purpose

The purpose of this rule is to control volatile organic compounds leaks from valves, fittings, pumps, compressors, pressure relief devices, diaphragms, hatches, sight-glasses, and meters.

(2) Applicability

This Rule is applicable to components with the potential to release fugitive Volatile Organic Compounds (VOC).

(3) Exemptions

The provisions of this rule shall not apply to the following cases, where the person seeking the exemption shall supply the proof of the applicable criteria to the satisfaction of the APCO's designee:

(a) Components which present a safety hazard for inspection as documented and established in a safety manual or policy, previously, or with the prior written approval of the APCO's designee except that these components shall be monitored for leaks when it is safe to do so. Upon detection of a leak, component(s) shall be repaired or replaced as soon as the repairs or replacement can be carried out safely.

(b) Components being repaired or replaced within the specified repair or replacement period, as given in Table 2.

(c) Components exclusively handling commercial natural gas.

(d) Components exclusively handling fluids with a VOC concentration of ten percent by weight or less, determined according to test methods specified in subparagraph (H)(2).

(e) Components incorporated in lines, while operating under negative pressures.

(f) Components totally contained or enclosed such that there are no VOC emissions into the atmosphere.

(g) Lubricating fluids.

(h) Components buried below ground.

(i) Components handling liquids exclusively, if the weight percent evaporated is ten percent or less at 150^{o}C, as determined by ASTM Method D-86.

(j) Pressure vacuum valves on storage tanks.

(k) Components subject to District Rule 461.

(B) Definitions:

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

(1) Air Pollution Control Officer (APCO) – The person appointed to the position of Air Pollution Control Officer of the District pursuant to the provisions of California Health and Safety Code §40750 and his or her designee.

(2) Background – The ambient concentration of volatile organic compounds in the air determined at least one (1) meter upwind of the component to be inspected.

(3) Commercial Natural Gas – A mixture of gaseous hydrocarbons, with at least 80 percent methane, and less than 10 percent by weight volatile organic compounds, determined according to test methods specified in subparagraph (g)(2).

(4) Component – Any valve, fitting, pump, compressor, pressure relief device, diaphragm, hatch, sight-glass, and meter. They are further classified as:

(a) Major Component – Any 4-inch or larger valve, any 5-hp or larger pump, any compressor, and any 4-inch or larger pressure relief device.

(b) Minor Component – Any component which is not a major component.

(5) Compressor – A device used to compress gases and/or vapors by the addition of energy, and includes all associated components used for connecting and sealing purposes.

(6) District – The Antelope Valley Air Quality Management District the geographical area of which is described in District Rule 103.

(7) Exempt Compounds – Those compounds listed in 40 CFR 51.100(S)(1)

(8) Facility – A refinery, chemical plant, oil and gas production field, natural gas processing plant, or pipeline transfer station.

(9) Field Gas – Feed stock gas entering the natural gas processing plant.

(10) Fitting – A component used to attach or connect pipes or piping details, including but not limited to flanges and threaded connections.

(11) Gas Leak – One of the following:

(a) Major gas leak for any component except for a pressure relief device – The detection of gaseous volatile organic compounds in excess of 10,000 ppm as methane above background measured according to test procedures in subparagraph (H)(1).

(b) Minor gas leak for any component except for a pressure relief device – The detection of gaseous volatile organic compounds in excess of 1,000 ppm but not more than 10,000 ppm as methane above background measured according to test procedures in subparagraph (H)(1).

(c) Major gas leak for a pressure relief device – The detection of gaseous volatile organic compounds in excess of 200 ppm as methane above background measured according to test procedures in subparagraph (H)(1).

(12) Hatch – Any covered opening system that provides access to a tank or container, usually through the top deck.

(13) Inaccessible Component – Any component located over five meters above ground when access is required from the ground; or any component located over two meters away from a platform when access is required from the platform; or any component which would require the elevation of a monitoring personnel higher than two meters above permanent support surfaces.

(14) Inspection – Either of the following:

(a) Operator Inspection – A survey of components by the operator for the purpose of determining compliance with this rule.

(b) District Inspection – A survey of components by District personnel or their representatives.

(15) Liquid Leak – One of the following:

(a) The dripping of liquid volatile organic compounds at the rate of more than three drops per minute.

(b) A visible liquid mist.

(c) Any visible indication of leakage at or near the seal/shaft interface for gas compressors.

(16) Lubricating Fluid – A fluid that provides lubrication of moving parts in a pump, including barrier fluids.

(17) Platform – Any raised, permanent, horizontal surface for the purpose of gaining access to components.

(18) Pressure Relief Device (PRD) – A pressure relief valve or a rupture disc.

(19) Pressure Relief Valve (PRV) – A valve which is automatically actuated by upstream static pressure, and used for safety or emergency purposes.

(20) Pump – A device used to transport fluids by the addition of energy, and includes all associated components used for connecting or sealing purposes.

(21) Repair – Any of the following:

(a) On-Site Repair – Corrective action for the purpose of eliminating leaks and which is not a significant repair.

(b) Significant Repair – Corrective action for the purpose of eliminating leaks involving the temporary removal or taking out of service of a component.

(22) Rupture Disc – A diaphragm held between flanges for the purpose of isolating a volatile organic compound from the atmosphere or from a downstream pressure relief valve.

(23) Valve – A device that regulates or isolates the fluid flow in a pipe, tube, or conduit by means of an external actuator; including flanges, flange seals, and other components used for attachment or sealing.

(24) Volatile Organic Compound (VOC) – Any volatile compound containing the element carbon, excluding methane, carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates, ammonium carbonate, and exempt compounds as listed in 40 CFR 51.100(s)(1).

(C) Leak Control Requirements

(1) Any liquid leak or gas leak of over 50,000 ppm detected by District inspection shall constitute a violation of this rule.

(2) Any major gas leak detected by District inspection, within any continuous 24-hour period, and numbering in excess of the Leak Thresholds for that component listed below in Table 1, shall constitute a violation of this rule.

TABLE 1. LEAK THRESHOLDS

Component	Max. No. of Leaks (200 or less components inspected)	Max. No. of Leaks (over 200 components inspected)
Valves	1	0.5% of number inspected
Pumps	2	1% of number inspected
Compressors	1	1
PRDs	1	1
Other Components	1	1

The maximum number of leaks in Table 1 shall be rounded upwards to the nearest integer, where required.

(3) Open-ended lines and valves located at the end of lines shall be sealed with a blind flange, plug, cap, or a second closed valve, at all times except during operations requiring process fluid flow through the open-ended line.

(D) Identification Requirements

(1) All major components shall be physically identified clearly and visibly for inspection, repair, replacement, and recordkeeping purposes.

(2) All minor components shall be clearly identified in Piping and Instrumentation (P&I) flow diagrams, and/or grouped together functionally for inspection, repair, replacement, and recordkeeping purposes.

(3) Any change(s) in major component identification shall require prior written approval from the APCO's designee.

(E) Operator Inspection Requirements

(1) All accessible pumps, compressors, and pressure relief devices shall be audio-visually inspected once during every eight-hour operating period, except for unmanned oil and gas production fields, and unmanned pipeline transfer stations.

(2) All accessible components shall be inspected quarterly.

(3) All inaccessible components shall be inspected annually.

(4) A pressure relief device shall be inspected within 14 calendar days after every functional pressure relief.

(5) The inspection frequency for accessible components, except pumps and compressors, at a facility, as required in subparagraph (E)(2), may change from quarterly to annually, provided all of the following conditions are met.

(a) All accessible components, except pumps and compressors, at that facility have been successfully operated and maintained with no liquid leaks and with major gas leaks within the Leak Thresholds for such components listed in Table 1, for five consecutive quarters; and

(b) The above is substantiated by documentation and submitted for written approval from the APCO's designee.

(6) The annual inspection frequency for all accessible, components, except pumps and compressors, if approved in subparagraph (E)(5), shall revert to quarterly, should the annual inspection or District inspection show any liquid leak or major gas leaks in excess of the Leak Thresholds for such components listed in Table 1.

(F) Maintenance Requirements

(1) A component shall be repaired or replaced within the following time period after detection of the leak by operator inspection or District inspection, according to Table 2, Repair Periods.

TABLE 2. REPAIR PERIODS

Type of Leak	Time Period
Minor Gas Leak	14 Calendar Days
Major Gas Leak	5 Calendar Days
Gas Leak over 50,000 ppm	1 Calendar Day
Liquid Leak	1 Calendar Day

(2) The repaired or replaced component shall be subjected to operator inspection within 30 days of the repair or replacement.

(3) A component or parts thereof shall be replaced with Best Available Control or Retrofit Technology (BACT or BARCT), or vented to an air pollution control device approved by the APCO's designee, after it has been subjected to five significant repair actions for a liquid leak or a major gas leak within a continuous twelve-month period.

(4) The reporting provisions of Rule 430 shall not be applicable to components being repaired or replaced under the provisions of this rule, except compressors.

(G) Recordkeeping Requirements

(1) Records of leaks detected by quarterly or annual operator inspection, and subsequent repair and reinspection, shall be submitted to the APCO's designee, within 30 or 60 days, respectively. Such records shall be submitted on standard forms specified by the District and shall contain all information required on the form.

(H) Test Methods

(1) Measurements of gaseous volatile organic compound leak concentrations shall be conducted according to EPA Reference Method 21 using an appropriate analyzer calibrated with methane at a distance of 1 cm or less from the source.

(2) The volatile organic compound content of fluids shall be determined using ASTM methods E-168, E-169, or E-260, or any other alternative test method approved in advance as a source-specific State Implementation Plan revision by the United States Environmental Protection Agency and the California Air Resources Board, and authorized by the APCO's designee.

(3) All records of operator inspection and repair shall also be maintained at the facility for a period of two (2) years and made available to the District staff on request.

(I) Other Rules and Regulation Applicability

(1) In case of conflict between the provisions of this rule and any other rule, the provisions of the rule which more specifically applies to the subject shall prevail.

[SIP: Submitted as amended 6/17/08 on _____; Approved 8/25/94, 59 FR 43754, 40 CFF 52.220(c)(197)(i)(A)(1); Approved _____, _____, 40 CFR 52.220(c)(184)(i)(B)(3)]

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ANTELOPE VALLEY AIR POLLUTION CONTROL DISTRICT

RULE 1175
CONTROL OF EMISSIONS FROM THE MANUFACTURE OF POLYMERIC CELLULAR (FOAM) PRODUCTS

(Adopted November 3, 1989)(Amended January 5, 1990) (Amended May 13, 1994)

(a) Applicability

This rule shall apply to polymeric cellular products manufacturing operations including but not limited to expandable polystyrene, polystyrene foam extrusion, polyurethane, isocyanurate and phenolic foam operations. All steps of the manufacturing operation and the storage of the final product for a maximum of 48 hours are subject to the requirements of this rule.

(b) Definitions

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

1. APPROVED EMISSION CONTROL SYSTEM means any system used to reduce manufacturing emissions and consists of a collection and a control device, which are approved, in writing, by the Executive Officer. The control system must be operated subject to the following provisions:

   (A) The emission collection system shall collect at least a 90 percent by weight of the manufacturing emissions; and

   (B) The control device shall reduce emissions from the emission collection system by at least 95 percent, by weight.

2. Blowing Agent means a liquid, gaseous or solid material that facilitates the formation of a cellular product from raw polymeric material.
3. Chlorofluorocarbon (CFC) is any chlorinated fluorinated compound of carbon, excluding;

   chlorodifluoromethane (HCFC-22),

   dichlorotrifluoroethane (HCFC-123),

   tetrafluoroethane (HFC-134a),

   dichlorofluoroethane (HCFC-141b),

   chlorodifluoroethane (HCFC-142b)

   2-chloro-1,1,1,2-tetrafluoroethane (HCFC-124),

4. EXEMPT COMPOUNDS are any of the following compounds:

   (A) Group I (General)

   trifluoromethane (HFC-23)

   pentafluoroethane (HFC-125)

   1,1,2,2-tetrafluoroethane (HFC-134)

tetrafluoroethane (HFC-134a)

1,1,1-trifluoroethane (HFC-143a)

1,1-difluoroethane (HFC-152a)

chlorodifluoromethane (HCFC-22)

dichlorotrifluoroethane (HCFC-123)

2-chloro-1,1,1,2-tetrafluoroethane (HCFC-124)

dichlorofluoroethane (HCFC-141b)

chlorodifluoroethane (HCFC-142b)

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

sulfur-containing perfluorocarbons with no unsaturations and with sulfur bonds only to carbon and fluorine

(B) Group II

methylene chloride

1,1,1-trichloroethane (methyl chloroform)

trifluoromethane (FC-23)

trichlorotrifluoroethane (CFC-113)

dichlorodifluoromethane (CFC-12)

trichlorofluoromethane (CFC-11)

dichlorotetrafluoroethane (CFC-114)

chloropentafluoroethane (CFC-115)

The use of Group II compounds and/or carbon tetrachloride may be restricted in the future because they are toxic, potentially toxic, upper-atmosphere ozone depleters, or cause other environmental impacts. By January 1, 1996, chlorofluorocarbons (CFC), 1,1,1,-trichloroethane (methyl chloroform), and carbon tetrachloride will be phased out in accordance with the Code of Federal Regulations Title 40, Part 82 (December 10, 1993).

5. EXPANDABLE POLYSTYRENE (EPS) MOLDING OPERATIONS consist of a series of processes, where polystyrene beads and blowing agent are expanded by exposure to steam or any other expansion agent and processed through cup, block or shape molding into low-density, closed cell, cellular products. EPS products include but are not limited to drinking cups, insulation board, packaging material, and ice chests.
6. Manufacturing Emissions are any emissions of VOC, CFC, or methylene chloride that occur during the manufacturing operation.
7. Manufacturing Operation means every step of the processing of a polymeric material from the delivery of the raw material, until the storage of the final cellular product.
8. RAW MATERIAL means all polystyrene beads, polyurethane, and blowing agent used in the manufacture of

polymeric cellular products.

9. RIGID POLYURETHANE is a closed cell polyurethane, primarily manufactured as rigid slabstock, laminated boardstock, field spray foam or pour-in-place foam.
10. VOLATILE ORGANIC COMPOUND (VOC) is any volatile compound of carbon, excluding methane, carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates, and exempt compounds.

(c) Emission Control Requirements

1. Manufacturing Operations, Excluding Expandable Polystyrene (EPS) Molding Operations

   (A) By January 1, 1994, each polyurethane operation subject to the rule shall discontinue its use of CFCs, VOCs, or methylene chloride.

   (B) Each manufacturing operation, excluding rigid polyurethane operations shall reduce yearly emissions from its 1988 emissions baseline, based on Rule 301 emission fees filing, by 100 percent, beginning calendar year 1994.

2. Expandable Polystyrene (EPS) Molding Operations

   The owner or operator of an expandable polystyrene (EPS) molding operation shall demonstrate, to the satisfaction of the Executive Officer, that manufacturing emissions and post-manufacturing emissions, assuming all the blowing agent is released from the product, are less than 2.4 lbs per 100 lbs of raw material processed.

3. The owner or operator of any polymeric cellular manufacturing operation, subject to the requirements of subparagraph (c)(1) or (c)(2), shall submit a plan to the District subject to approval by the Executive Officer's designee, that will demonstrate compliance with subparagraph (c)(1) or (c)(2).
4. The owner or operator of any polymeric cellular manufacturing operation that has not achieved the requirements specified in subparagraphs (c)(1), (c)(2), or (c)(3) shall:

   (A) Submit permit applications for the installation of an emission control system within four months of the date that compliance with such requirement was not achieved; and

   (B) Within 12 months of failing to meet the requirements of subparagraph (c)(1), (c)(2), or (c)(3), the following provisions must be satisfied:

      (i) An approved emission control system is installed and operating with all sources of manufacturing emissions vented only to the approved emission control system; and

      (ii) Emissions from the final manufactured product are vented only to the approved emission control system for at least:

         (I) 48 hours, in the case of expandable polystyrene molding operations that process more than 800,000 pounds per calendar year of raw material; or

         (II) 24 hours, in the case of all other manufacturing operations.

(d) Exemptions

1. The provisions of paragraph (c) shall not apply to any:

   (A) Expandable polystyrene operation that processes less than 200 pounds per day of raw material.

   (B) Rigid polyurethane operation that processes less than 1,000 pounds per day of raw material.

2. The provisions of subparagraph (c)(4)(B)(ii) shall not apply to any facility that only manufactures:

   (A) rigid polyurethane foam; or

   (B) EPS foam and the highest concentration of the blowing agent in the cellular product is 1.8 percent or

less by weight within 15 minutes of completion of the manufacturing operation. Verification of the concentration shall be demonstrated annually, pursuant to a protocol submitted to the District and subject to approval by the Executive Officer.

(e) Recordkeeping

1. Any owner or operator subject to this rule or claiming an exemption under paragraph (d) shall maintain a daily record of operations, including but not limited to the amount of raw material processed, the equipment used, and the type of blowing agent used. Such records shall be retained in the operator's files for a period of two years and be available to a District representative upon request.
2. Owners and/or operators using an emission control system as a means of complying with this rule shall maintain daily records of the operation and maintenance of the emission control system. These records shall include key system operating parameters such as temperatures, pressures, flowrates, and other measures to demonstrate compliance with paragraph (c)(4).

(f) Test Methods

1. Determination of VOC Content

   The VOC content of materials subject to the provisions of this rule shall be determined by the following methods:

   (A) United States Environmental Protection Agency (USEPA) Reference Method 24 (Code of Federal Regulations Title 40 Part 60, Appendix A,). The exempt solvent content shall be determined by SCAQMD Method 303 (Determination of Exempt Compounds) contained in the SCAQMD "Laboratory Methods of Analysis for Enforcement Samples" manual; or,

   (B) SCAQMD Method 304 [Determination of Volatile Organic Compounds (VOCs) in Various Materials] contained in the SCAQMD "Laboratory Methods of Analysis for Enforcement Samples" manual.

   (C) Exempt Perfluorocarbon Compounds

   The following classes of compounds will be analyzed as exempt compounds for compliance with paragraph (c), only when manufacturers specify which individual compounds are used in the coating formulation:

   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 sulfur bonds only to carbon and fluorine.

   In addition, the manufacturers must identify the test methods approved and used by the United States Environmental Protection Agency, California Air Resources Board, and the District to quantify the amount of each exempt compound.

2. Determination of Pentanes in Expandable Styrene Polymers

   The weight percent pentane in expandable polystyrene polymer shall be determined by SCAQMD Method 306 (Analysis of Pentanes in Expandable Styrene Polymers) contained in the SCAQMD "Laboratory Methods of Analysis for Enforcement Samples" manual.

3. Determination of Efficiency of Emission Control System
   (A) The efficiency of the collection device of the emission control system required in paragraph (c)(4) shall

be determined by the USEPA method cited in 55 Federal Register 26865 (June 29, 1990), or any other method approved by the United States Environmental Protection Agency, the California Air Resources Board, and the District.

(B) The efficiency of the control device of the emission control system required in paragraph (c)(4) and the VOC content in the control device exhaust gases, measured and calculated as carbon, shall be determined by USEPA Test Methods 25, 25A, or SCAQMD Method 25.1 (Determination of Total Gaseous Non-Methane Organic Emissions as Carbon) as applicable. USEPA Test Method 18, or ARB Method 422 shall be used to determine emissions of exempt compounds.

4. Multiple Test Methods

When more than one test method or set of test methods are specified for any testing, a violation of any requirement of this rule established by any one of the specified test methods or set of test methods shall constitute a violation of the rule.

(Adopted November 3, 1989)(Amended January 5, 1990)

(Amended May 13, 1994)

RULE 1176. SUMPS AND WASTEWATER SEPARATORS

(a) Purpose

This rule is intended to limit volatile organic compound emissions from sumps, wastewater separators, separator forebays, process drains, sewer lines, and junction boxes located at oil production fields, refineries, chemical plants, and industrial facilities handling petroleum liquids.

(b) Definitions

(1) CATCH BASIN is an open basin which serves as a single collection point for rainwater or stormwater run-off directly from ground surfaces, or for wastewater.

(2) CHEMICAL PLANT is any facility engaged in producing organic or inorganic chemicals, and/or manufacturing products by chemical processes. Any facility or operation that has 282 as the first three digits in their Standard Industrial Classification Code as defined in the Standard Industrial Classification Manual is included.

(3) CLOSED VENT SYSTEM is a system that is not open to the atmosphere and is composed of piping, connections, and, if necessary, flow-inducing devices that transport gas or vapor from an emission source to an air pollution control device.

(4) EXEMPT COMPOUNDS are any of the following compounds:

(A) Group I (General)

trifluoromethane (HFC-23)

pentafluoroethane (HFC-125)

1,1,2,2-tetrafluoroethane (HFC-134)

tetrafluoroethane (HFC-134a)

1,1,1-trifluoroethane (HFC-143a)

1,1-difluoroethane (HFC-152a)

chlorodifluoromethane (HCFC-22)

dichlorotrifluoroethane (HCFC-123)

2-chloro-1,1,1,2-tetrafluoroethane (HCFC-124)

dichlorofluoroethane (HCFC-141b)

chlorodifluoroethane (HCFC-142b)

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

sulfur-containing perfluorocarbons with no unsaturations and with sulfur bonds only to carbon and fluorine

(B) Group II

methylene chloride

1,1,1-trichloroethane (methyl chloroform)

trifluoromethane (FC-23)

trichlorotrifluoroethane (CFC-113)

dichlorodifluoromethane (CFC-12)

trichlorofluoromethane (CFC-11)

dichlorotetrafluoroethane (CFC-114)

chloropentafluoroethane (CFC-115)

The use of Group II compounds and/or carbon tetrachloride may be restricted in the future because they are toxic, potentially toxic, upper-atmosphere ozone depleters, or cause other environmental impacts. By January 1, 1996, chlorofluorocarbons (CFC), 1,1,1,-trichloroethane (methyl chloroform), and carbon tetrachloride will be phased out in accordance with the Code of Federal Regulations Title 40, Part 82 (December 10, 1993).

(5) FIXED COVER is any cover made out of metal(s), polymer(s), or other material, and installed in a permanent position over the liquid.

(6) FLOATING COVER is any cover made out of metal(s), polymer(s), or other material, which is in contact with a liquid surface at all times.

(7) INDUSTRIAL FACILITIES are those engaged in the production and distribution of natural gas, pipeline distribution or wholesale distribution of crude petroleum and petroleum products except gasoline, as classified under the Standard Industrial Classification group numbers 492, 461, or 517, respectively, of the Standard Industrial Classification Manual.

(8) JUNCTION BOX is a manhole or access point to a wastewater sewer system line.

(9) OIL PRODUCTION FIELD is a facility on which crude petroleum production and handling are conducted, as defined in the Standard Industrial Classification Manual as Industry No. 1311, Crude Petroleum and Natural Gas.

(10) REFINERY is a facility that processes petroleum, as defined in the Standard Industrial Classification Manual as Industry No. 2911, Petroleum Refining.

(11) RIGID FLOATING COVER is a floating cover made out of non-flexible materials.

(12) SEPARATOR FOREBAY is that section of a gravity-type separator which receives the untreated contaminated waste water from the preseparator flume and acts as a header which distributes the influent to the separator channels.

(13) SEWER LINE is a lateral trunk line, branch line, ditch, channel, or other conduit used to convey wastewater to downstream oil-water separators.

(14) SUMP is a surface impoundment or excavated depression in the ground, lined or unlined, that is used for separating oil or other organic liquids, water, and solids. A sump is classified as:

(A) PRIMARY OR FIRST STAGE PRODUCTION SUMP is any sump which receives a stream of crude oil and produced water directly from oil production wells or field gathering systems.

(B) SECONDARY OR SECOND STAGE SUMP is any sump which receives a waste water stream from one or more primary sumps, a free water knockout device, or a tank as well as intermittent or emergency streams.

(C) TERTIARY OR THIRD STAGE SUMP is any sump which receives a waste water stream from the secondary sump or other separation processes.

(15) VOLATILE ORGANIC COMPOUND (VOC) is a chemical compound of carbon, excluding carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates, ammonium carbonate, and the exempt compounds listed in subparagraph (b)(4) above.

(16) WASTEWATER SEPARATOR is any device used to separate VOCs from the waste water.

(c) General Requirements

(1) Primary sumps shall not be used.

(2) Secondary sumps, tertiary sumps, or wastewater separators shall be replaced by covered tanks which are approved by the Executive Officer's designee; or provided with any one of the following:

(A) A floating cover equipped with seals. The floating cover and/or seals shall be replaced every five (5) years, unless the owner/operator can demonstrate to the satisfaction of the Executive Officer's designee that the floating cover and/or seals has never been in violation with the provisions of this rule.

(B) A fixed cover, equipped with a closed vent system that directs vapors to an air pollution control device, with a control efficiency of 95 percent by weight or greater, measured according to the test method specified in subparagraph (g)(2). The closed vent system shall not produce detectable VOC emissions in excess of 500 ppm above background, measured according to the test method specified in subparagraph (g)(1).

(C) Any measure which is equivalent to, or more effective in reducing VOC emissions than the requirements of subparagraphs (c)(2)(A) or (c)(2)(B), with a control efficiency of 95 percent by weight or greater, measured according to the test method specified in subparagraph (g)(2), as demonstrated by the applicant to the satisfaction of the Executive Officer's designee.

(3) The following shall not be used unless equipped and operated as specified below:

(A) Separator forebays and sewer lines:

All interconnections with the receiving wastewater separators shall be enclosed by fixed covers such that no liquid surface is exposed to the atmosphere.

(B) Process drains:

At any drain opening to the atmosphere, VOC emissions shall not exceed 500 ppm above background, measured according to the test method specified in subparagraph (g)(1).

(C) Junction boxes:

Junction boxes shall be totally enclosed with a solid, gasketed, fixed cover or a manhole cover. Each fixed cover shall be permitted to have an open vent pipe no more than four (4) inches in diameter and at least three (3) feet in length. Each manhole cover shall be permitted to have an opening no more than four (4) inches in diameter.

(4) Slop oil, oil-contaminated wastewater, or tar from a sump or wastewater separator shall be handled in a manner approved in writing by the Executive Officer's designee.

(d) Requirements for Covers

Covers for secondary and tertiary sumps, and wastewater separators shall meet all of the following requirements:

(1) The cover material shall be impermeable to VOCs, and free from holes, tears, or openings.

(2) Drains on covers shall be provided with a slotted membrane fabric cover, or equivalent, over at least 90 percent of the open area.

(3) Gauging or sampling devices on the compartment cover shall be covered. The latter cover shall be kept closed, with no visible gaps between the cover and the compartment, except when the sampling device is being used.

(4) Hatches on covers shall be kept closed and free of gaps, except when opened for inspection, maintenance, or repair.

(5) The perimeter of a cover, except for a rigid floating cover, shall form a seal free of gaps with the foundation to which it is attached.

(6) A rigid floating cover shall be installed and maintained such that the gap between the compartment or sump wall and the seal does not exceed 1/8 inch for a cumulative length of 97 percent of the perimeter of the compartment. No gap between the wall and the seal shall exceed 1/2 inch.

(e) Operator Inspection and Maintenance Requirements

(1) Air pollution control device(s) required in subparagraph (c)(2)(B) shall be subjected to performance tests semiannually, for verification of control efficiency according to the test method specified in subparagraph (g)(2).

(2) Closed vent systems required in subparagraph (c)(2)(B) and process drains shall be inspected monthly for VOC emissions, according to the test method specified in subparagraph (g)(1).

(3) Defect(s) or leak(s) detected through either operator inspection or District inspection shall be repaired or rectified within three (3) calendar days of detection. The repaired or replaced component shall be reinspected within 15 calendar days after the repair or replacement.

(f) Recordkeeping Requirements

All records of operator inspections, performance tests, repairs, replacements, and reinspections shall be maintained at the facility for a period of two (2) years and made available to the District staff upon request.

(g) Test Methods

(1) Measurement of gaseous VOC concentration shall be conducted according to EPA Reference Method 21, using an appropriate analyzer calibrated with methane, at a distance of 1 cm or less from the source. If the analyzer reading exceeds 500 ppm, an appropriate sample shall be taken for laboratory analysis according to EPA Method 25, as it exists on May 13, 1994, and test procedures shall be performed in accordance with a protocol approved by the Executive Officer's designee.

(2) Measurement of control efficiency of an air pollution control device shall be conducted according to EPA Reference Method 25, as it exists on May 13, 1994, and test procedures shall be performed in accordance with a protocol approved by the Executive Officer's designee.

(h) Exemptions

The provisions of this rule shall not apply to the following:

(1) Equipment which, if covered, would present safety hazards to plant personnel, as documented and established in a previous safety manual or policy, subject to approval by the Executive Officer's designee.

(2) Tanks, pressure-vacuum valves on tanks, and impound basins or spill containments around tanks.

(3) Hatches, which are subject to Rule 1173.

(4) Equipment that exclusively receive, hold, or discharge rainwater, stormwater runoff, or non-contact cooling water.

(5) Well cellars used in emergencies at oil production fields, if clean-up procedures are implemented within 24 hours after each emergency occurrence and completed within ten (10) calendar days.

(6) Sumps or wastewater separators, if the VOC content of the liquid entering is less than 5 mg per liter, as determined by EPA Test Method 8240. Sampling shall occur at the inlet to the sump or wastewater separator.

(i) Violation

Any defect, leak, or condition detected through District inspection, that does not comply with the provisions of paragraphs (c) General Requirements, (d) Requirements for Covers, or (e) Operator Inspection and Maintenance Requirements, shall be a violation of this rule.

(j) Compliance Schedule

(1) Compliance with this rule shall be achieved no later than November 1, 1990, except where air pollution control

device(s) must be constructed and operated to achieve compliance.

(2) Applications for permits to construct air pollution control device(s) must be submitted no later than May 1, 1990. For such cases, compliance shall be achieved no later than May 1, 1991.

(k) Rule 464 Applicability

The provisions of Rule 464 shall be applicable to wastewater separators until full compliance with this rule is achieved, or until the dates specified in paragraph (j) Compliance Schedule, whichever is earlier.

ANTELOPE VALLEY AIR POLLUTION CONTROL DISTRICT

RULE 1179
PUBLICLY OWNED TREATMENT WORKS OPERATIONS

(Adopted June 7, 1991)(Amended March 6, 1992)

(a) Applicability

This rule applies to all existing Publicly Owned Treatment Works (POTWs).

(b) Definitions

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

1. EXEMPT COMPOUNDS are any of the following compounds:

   (A) Group I (General)

   chlorodifluoromethane (HCFC-22)

   dichlorotrifluoroethane (HCFC-123)

   tetrafluoroethane (HFC-134a)

   dichlorofluoroethane (HCFC-141b)

   chlorodifluoroethane (HCFC-142b)

   (B) Group II (Under Review)

   methylene chloride

   1,1,1-trichloroethane (methyl chloroform)

   trifluoromethane (FC-23)

   trichlorotrifluoroethane (CFC-113)

   dichlorodifluoromethane (CFC-12)

   trichlorofluoromethane (CFC-11)

   dichlorotetrafluoroethane (CFC-114)

   chloropentafluoroethane (CFC-115)

2. LARGE-CAPACITY POTWs are Publicly Owned Treatment Works that have a design capacity of 10 million gallons per day, or greater.
3. ODOR is a characteristic of a substance that is detectable by the human olfactory organs and may contribute to a public nuisance.
4. ODOROUS EMISSIONS are odor parameters measured by dynamic dilution olfactometry and odor panels. Odor emissions are expressed as dilution-to-thresholds ratios or odor concentration units.
5. PUBLICLY OWNED TREATMENT WORKS (POTWs) are wastewater treatment or reclamation plants owned

or operated by a public entity, including all operations within the boundaries of the wastewater and sludge treatment plant.

6. SMALL-CAPACITY POTWs are Publicly Owned Treatment Works that have a design capacity of less than 10 million gallons per day.
7. Volatile Organic Compound (VOC) is any compound of carbon, excluding carbon monoxide, carbon dioxide, carbonic acid, metallic carbides, carbonates, methane, and the exempt compounds.

(c) Requirements for Large-Capacity POTWs

1. On or before June 1, 1992, the operator of each POTW shall submit an Emissions Inventory Plan to the Executive Officer for approval. The Emissions Inventory Plan shall:

   (A) Include and specify the procedures, source test protocols, methods of analysis, and combustion source test data, where available, that will be used to quantify VOC and odorous emissions as part of a facility-wide VOC Emissions Inventory Report and Odor Evaluation Report, respectively.

   (B) Include a description, the name, the operating agency, and the exact location of the facility.

   (C) Provide the plant parameters, including, but not limited to, the plant design capacity, the operating capacity, projected capacity, the diurnal and seasonal flow profiles, and a list identifying and quantifying the unit processes and operations used at the facility.

   (D) Provide a detailed description of the service area, including the geographic location of the service area boundary in terms of Universal Transverse Mercator (UTM) coordinates, and a plot plan of the main sewer and interceptor lines.

   (E) Provide the disaggregated population estimates for service area from the 1991 Air Quality Management Plan, and the projected service population for the years 1995, 2000, 2005, and 2010. Provide the methodology used to project plant flow from population data.

2. The operator of each POTW shall, within 180 days of approval of the Emissions Inventory Plan, implement the Emissions Inventory Plan as approved by the Executive Officer, and shall submit to the District a facility-wide VOC Emissions Inventory Report. The facility-wide VOC Emissions Inventory Report shall:

   (A) Provide separate, quantitative measurements of the controlled and uncontrolled VOC emissions for each unit process and unit operation at the POTW, except for combustion processes or sources.

   (B) Provide a quantitative estimate of the total facility-wide VOC emissions, including the VOC emissions resulting from combustion processes or sources.

3. The operators of each POTW shall, within 180 days of approval of the Emissions Inventory Plan, prepare and submit to the District an Odor Evaluation Report based on the approved Emissions Inventory Plan. The Odor Evaluation Report shall:

   (A) Provide quantitative measurements of the controlled and uncontrolled odorous emissions for each unit process and unit operation at the POTW.

   (B) Identify all existing and potential sources of odorous emissions, and specify the likely physical and biological conditions leading to the generation of odorous emissions.

   (C) Provide the facility's equipment and process breakdown history for the past two years that have led to odor complaints, and the total number of odor-related citizen complaints received for the past two years.

   (D) Recommend any processes, procedures, or operations for facility-wide odorous emissions abatement or elimination.

(d) Requirements for Small-Capacity POTWs

1. On or before July 1, 1992, the operators of each POTW shall submit a Facility Description Report to the District. The Facility Description Report shall:

   (A) Include a description, the name, the operating agency, and the exact location of the facility.

   (B) Provide the plant parameters, including, but not limited to, the plant design capacity, the operating capacity, the projected capacity, the diurnal and seasonal flow profiles, and a list identifying and quantifying the unit processes and operations used at the facility.

   (C) Provide a detailed description of the service area, including the geographic location of the service area boundary in terms of Universal Transverse Mercator (UTM) coordinates, and a plot plan of the main sewer and interceptor lines.

   (D) Provide the disaggregated population estimates for service area from the 1991 Air Quality Management Plan, and the projected service population for the years 1995, 2000, 2005, and 2010. Provide the methodology used to project plant flow from population data.

2. On or before January 1, 1993, the operators of each POTW shall submit a wastewater analysis report that provides the mass rate of VOCs present in the influent and effluent wastewater. The analysis shall include measurements for average and peak flow rates.

(e) Joint VOC Emissions Testing

Except for headworks and grit chambers for all large-capacity POTWs, and sedimentation tanks and activated sludge systems for POTWs with a design capacity of 50 million gallons per day or greater, joint VOC emissions testing of unit processes and unit operations may be conducted by two or more of the large-capacity POTWs provided the following conditions are met:

1. A written request for joint VOC emissions testing is incorporated in the Emissions Inventory Plan required by paragraph (c)(1), including detailed protocols and program description;
2. A demonstration is made that emissions estimates derived for each unit process or unit operation will be representative of emissions from this type of unit process or unit operation at any of the POTWs involved in the joint VOC testing program;
3. That emissions estimates developed under joint VOC emissions testing be correlated against wastewater parameters and other POTW emissions data for the same unit process or unit operation; and
4. That written approval from the Executive Officer is granted.(f) Exemptions

   Odorous emissions resulting from combustion sources are exempt from the requirements of subparagraphs (c)(1)(A) and (c)(3)(A).

RULE 1301. GENERAL

(Adopted Oct. 5, 1979)(Amended March 7, 1980)
(Amended Sept. 10, 1982)(Amended July 12, 1985)
(Amended Sept. 5, 1986) (Amended June 28, 1990)
(Amended December 7, 1995)

(a) Purpose

This regulation sets forth pre-construction review requirements for new, modified, or relocated facilities, to ensure that the operation of such facilities does not interfere with progress in attainment of the national ambient air quality standards, and that future economic growth within the South Coast Air Quality Management District (District) is not unnecessarily restricted. The specific air quality goal of this regulation is to achieve no net increases from new or modified permitted sources of nonattainment air contaminants or their precursors.

In addition to nonattainment air contaminants, this regulation will also limit emission increases of ammonia, and Ozone Depleting Compounds (ODCs) from new, modified or relocated facilities by requiring the use of Best Available Control Technology (BACT).

(b) Applicability

1. The provisions of this regulation shall apply to the installation of a new source and to the modification of an existing source which may cause the issuance of any nonattainment air contaminant, any ODC, or ammonia at any facility. For facilities subject to Regulation XX - RECLAIM, Regulation XIII only applies to pollutants not specifically regulated by Regulation XX.
2. Construction of new, or modification of existing power plants subject to Public Resources Code 25500 and following sections shall be evaluated and processed in accordance with the regulations of the California Energy Resources Conservation and Development Commission governing such facilities.
3. Any non-road or qualifying portable internal combustion engine as defined in Rule 301(b)(11) and (b)(13) subject to EPA regulations, shall upon approval by the Executive Offier or designee be exempt from Regulation XIII.
4. Any equipment registered pursuant to Rule 2100 - Registration of Portable Equipment shall be exempt from Regulation XIII.

(c) Effective Date

1. Implementation Date

   This regulation, as amended on December 7, 1995 shall become effective on February 1, 1996. Applications received by the District shall be subject to Regulation XIII as amended and in effect at the time such application is deemed complete, regardless of the date of equipment installation.

2. NSR Balance
   All positive NSR balances will be adjusted to zero on December 7, 1995.

(d) State Standards

For the purpose of this regulation, all references to the national ambient air quality standards and nonattainment shall be interpreted to include state ambient air quality standards. This subsection shall not be included as part of any revision to the District's portion of the State Implementation Plan (SIP).

(e) Compliance

Failure to comply with the requirements of Regulation XIII - New Source Review, shall result in enforcement action pursuant to the California Health and Safety Code and/or the federal Clean Air Act.

(Adopted Oct. 5, 1979)(Amended March 7, 1980)(Amended July 11, 1980)

(Amended Sept. 10, 1982)(Amended July 12, 1985)(Amended August 1, 1986)

(Amended Dec. 2, 1988)(Amended June 28, 1990)(Amended May 3, 1991)

(Amended December 7, 1995)

RULE 1302. DEFINITIONS

(a) ACTUAL EMISSIONS means the emissions of a pollutant from an affected source determined by taking into account actual emission rates and actual or representative production rates (i.e., capacity utilization and hours of operation).

(b) AIR CONTAMINANT means any air pollutant for which there is a national ambient air quality standard, or precursor to such air pollutant, including but not limited to: carbon monoxide, sulfur dioxide, nitrogen oxides, particulate matter, lead compounds and volatile organic compounds.

(c) ALLOWABLE EMISSIONS means the emissions rate of a stationary source calculated using the maximum rated capacity of the source, unless the source is subject to federally enforceable limits which restrict the operation rate, or hours of operation, or both, and the most stringent of the following: (1) the applicable standards set forth in 40 CFR Part 60 or 61; (2) any applicable SIP emissions limitation including those with a future compliance date; or (3) the emissions rate specified as federally enforceable permit conditions including those with a future compliance date.

(d) BANKING means the process of recognizing and certifying emission reductions and the registering transaction involving Emission Reduction Credits.

(e) BASIN means the South Coast Air Basin or the nonattainment Planning Area of the Riverside County portion of the Southeast Desert Air Basin (SEDAB), or the remaining portion of the Riverside County SEDAB area, or the Los Angeles County SEDAB area within the South Coast Air Quality Management District (District). The boundaries of each air basin shall be as defined by the California Air Resources Board.

(f) BEST AVAILABLE CONTROL TECHNOLOGY (BACT) means the most stringent emission limitation or control technique which:

(1) has been achieved in practice for such category or class of source; or

(2) is contained in any state implementation plan (SIP) approved by the United States Environmental Protection Agency (EPA) for such category or class of source. A specific limitation or control technique shall not apply if the owner or operator of the proposed source demonstrates to the satisfaction of the Executive Officer or designee that such limitation or control technique is not presently achievable; or

(3) is any other emission limitation or control technique, found by the Executive Officer or designee to be technologically feasible for such class or category of sources or for a specific source, and cost-effective as compared to

measures as listed in the Air Quality Management Plan (AQMP) or rules adopted by the District Governing Board.

(g) BEST AVAILABLE RETROFIT CONTROL TECHNOLOGY means 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.

(h) COGENERATION PROJECT means a project which:

(1) makes sequential use of exhaust steam, waste steam, heat or resultant energy from an industrial, commercial, or manufacturing plant or process for the generation of electricity; or

(2) makes sequential use of exhaust steam, waste steam, or heat from a thermal power plant, in an industrial, commercial, or manufacturing plant or process.

For the purposes of this definition, the "industrial, commercial or manufacturing plant or process" shall not be a thermal power plant or portion thereof. A cogeneration project shall not consist of steam or heat developed solely for electrical power generation. To qualify as a cogeneration project, the processes listed in (1) and (2) above must meet the conditions specified in Public Resources Code Section 25134.

(i) EMISSION LIMITATION is a federally enforceable permit condition limiting emissions from a discrete operation, unit or other pollutant emitting source.

(j) EMISSION REDUCTION CREDIT (ERC) means the amount of emissions reduction which is verified and determined to be eligible for credit at a facility in accordance with all District rules and regulations. An ERC represents final eligible emission reductions and may be used as such, in accordance with the provisions of Regulation XIII.

(k) ESSENTIAL PUBLIC SERVICE includes:

(1) sewage treatment facilities, which are publicly owned or operated, and consistent with an approved regional growth plan;

(2) prisons;

(3) police facilities;

(4) fire fighting facilities;

(5) schools;

(6) hospitals;

(7) construction and operation of a landfill gas control or processing facility;

(8) water delivery operations; and

(9) public transit.

(l) EXEMPT COMPOUNDS include any of the following compounds:

methylene chloride

trifluoromethane(HFC-23)

pentafluoroethane(HFC-125)

1,1,2,2-tetrafluoroethane (HFC-134)

tetrafluoroethane(HFC-134a)

1,1,1-trifluoroethane(HFC-143a)

1,1-difluoroethane(HFC-152a)

chlorodifluoromethane(HCFC-22)

dichlorotrifluoroethane(HCFC-123)

2-chloro-1,1,1,2-tetrafluoroethane(HCFC-124)

dichlorofluoroethane(HCFC-141b)

chlorodifluoroethane(HCFC-142b)

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

sulfur-containing perfluorocarbons with no unsaturations and with sulfur bonds only to carbon and fluorine

volatile methyl siloxanes

parachlorobenzotrifluoride

(m) FACILITY means any source or group of sources or other air contaminant-emitting activities which are located on one or more contiguous properties within the District, in actual physical contact or separated solely by a public roadway or other public right-of-way, and are owned or operated by the same person (or by persons under common control), or an outer continental shelf (OCS) source as determined in 40 CFR Section 55.2. Such above-described groups, if noncontiguous, but connected only by land carrying a pipeline, shall not be considered one facility. Sources or installations involved in crude oil and gas production in Southern California Coastal or OCS Waters and transport of such crude oil and gas in Southern California Coastal or OCS Waters shall be included in the same facility which is under the same ownership or use entitlement as the crude oil and gas production facility on-shore.

(n) FEDERALLY ENFORCEABLE means all permit limitations and conditions which are enforceable by the EPA Administrator.

(o) MAJOR MODIFICATION means any modification, as specified in subdivision (s), at an existing major polluting

facility that will cause;

(1) an increase of one pound per day or more, of the facility's potential to emit oxides of nitrogen (NO_X) or volatile organic compounds (VOCs), provided the facility is not located in the Southeast Desert Air Basin (SEDAB), or

(2) an increase of 40 tons per year or more, of the facility's potential to emit oxides of sulfur (SO_X), or

(3) an increase of 15 tons per year or more, of the facility's potential to emit particulate matter with an aerodynamic diameter of less than or equal to a nominal ten microns (PM_{10}); or,

(4) an increase of 100 tons per year or more, of the facility's potential to emit carbon monoxide (CO).

For an existing major polluting facility located in the SEDAB, major modification means any modification that will cause an increase of 25 tons per year or more, of the facility's potential to emit NO_X or VOC; whereas the requirements for SO_X, PM_{10}, and CO are as specified above in paragraphs (o)(2), (o)(3), and (o)(4).

(p) MAJOR POLLUTING FACILITY means any facility not located in the SEDAB which emits or has the potential to emit the following amounts or more:

Volatile Organic Compounds (VOC) (10) tons per year

Nitrogen Oxides (NO_x) (10) tons per year

Sulfur Oxides (SO_x) (70) tons per year

Particulate Matter (PM_{10}) (70) tons per year

Carbon Monoxide (CO) (100) tons per year

For any facility located in the SEDAB, major polluting facility means any facility which emits or has the potential to emit the following amounts or more:

Volatile Organic Compounds (VOC) (25) tons per year

Nitrogen Oxides (NO_x) (25) tons per year

Sulfur Oxides (SO_x) (100) tons per year

Particular Matter (PM_{10}) (70) tons per year

Carbon Monoxide (CO) (100) tons per year

(q) MOBILE SOURCE means a device by which any person or property may be propelled, moved, or drawn upon a roadway, stationary rails or tracks, waterways, or through the atmosphere, and which emits air contaminants.

(r) MODELING means using an air quality simulation model, based on specified assumptions and data, and which model is approved by the EPA and has been approved in writing by the Executive Officer or designee.

(s) MODIFICATION means any physical change in equipment, change in method of operation, or an addition to an existing facility, which may cause the issuance of air contaminants. Routine maintenance and/or repair shall not be considered a physical change. A change in the method of operation of equipment, unless previously limited by an enforceable permit condition, shall not include:

(1) an increase in the production rate, unless such increase will cause the maximum design capacity of the equipment to be exceeded.

(2) an increase in the hours of operation.

(3) a change in operator of a facility.

(t) NEW SOURCE REVIEW (NSR) BALANCE means the sum of the emission increases, decreases, and offsets as listed in District records, and approved by the Executive Officer or designee that has been determined at a facility pursuant to the District's New Source Review rules since October 8, 1976 to December 7, 1995. Under no circumstances shall the New Source Review Balance be greater than the facility's potential to emit or less than zero.

(u) NONATTAINMENT AIR CONTAMINANT means any air contaminant for which there is a national or state ambient air quality standard, or precursor to such air contaminant, which:

(1) has been designated "nonattainment" pursuant to the California Air Resources Board in accordance with Section 39607 of California Health & Safety Code; or

(2) has been designated "nonattainment" pursuant to final rulemaking by the EPA as published in the Federal Register.

(v) OZONE DEPLETING COMPOUNDS (ODCs) are Class I substances identified in 40 CFR, Part 82, Appendix A, Subpart A, including, but not limited to the following compounds:

1,1,1-trichloroethane (methyl chloroform)

trichlorotrifluoroethane (CFC-113)

dichlorodifluoromethane (CFC-12)

trichlorofluoromethane (CFC-11)

dichlorotetrafluoroethane (CFC-114)

chloropentafluoroethane (CFC-115)

(w) PERMANENT means that emission reductions used to offset emission increases are assured for the life of the corresponding increase, whether unlimited or limited in duration.

(x) PERMIT UNIT means any article, machine, equipment, or other contrivance, or combination thereof, which may cause or control the issuance of air contaminants that is not exempt from permit requirements.

(y) POTENTIAL TO EMIT means the amount of pollutants calculated (1) using a calendar monthly average, and, (2) on a pound-per-day basis from permit conditions which directly limit the emissions, or, when no such conditions are imposed, from:

(1) the maximum rated capacity; and

(2) the maximum daily hours of operation; and

(3) the physical characteristics of the materials processed.

Fugitive emissions associated with the source shall be included in the potential to emit.

(z) PM_{10} means particulate matter with aerodynamic diameter of less than or equal to a nominal 10 microns as measured by an applicable reference test method.

(aa) PRECURSOR means a substance that, when released to the atmosphere, forms or causes to be formed or contributes to the formation of another or secondary air contaminant for which a national ambient air quality standard has been adopted, or whose presence in the atmosphere will contribute to the violation of one or more national ambient air quality standards. Precursors and secondary pollutants include:

PRECURSORS SECONDARY POLLUTANTS

a) photochemical oxidant (ozone)

Volatile Organic Compounds (VOC)

b) the organic fraction of suspended particulate matter

Nitrogen Oxides (NO_x) a) nitrogen dioxide (NO_2)

b) the nitrate fraction of suspended particulate matter

c) photochemical oxidant (ozone)

Sulfur Oxides (SO_x) a) Sulfur dioxide (SO_2)

b) sulfates (SO_4)

c) the sulfate fraction of suspended particulate matter

(bb) QUALIFYING FACILITY means a power generating facility which:

(1) produces electric energy solely by the use, as a primary energy source, of biomass, waste, renewable resources, geothermal resources, or any combination thereof; and

(2) has a power production capacity which, together with any other facilities located at the same site, is not greater than 80 megawatts; and

(3) is determined by the Federal Energy Regulatory Commission (FERC), by rule, to meet such requirements (including fuel use, fuel efficiency, and reliability) as the Commission may, by rule, prescribe; and

(4) is owned by a person not primarily engaged in the generation or sale of electric power, other than electric power solely from cogeneration facilities or facilities meeting the provisions of subparagraphs (1) and (2).

(cc) QUANTIFIABLE EMISSIONS means that the emission reductions eligible for ERCs were calculated both before and after the reduction using the same method and averaging time.

(dd) RELOCATION means the removal of an existing source from one parcel of land in the District and installation on another parcel of land where the two parcels are not in actual physical contact and are not separated solely by a public roadway or other public right-of-way.

(ee) RESOURCE RECOVERY PROJECT means a project which uses municipal waste, refuse-derived, biomass-derived or other nonfossil fuels for useful energy generation within the same basin that the fuel was generated.

(ff) SMALL BUSINESS means for BACT determination purposes only, any business which meets all of the following criteria:

(1) the number of employees is 100 or less;

(2) the total gross annual receipts are $2,000,000 or less;

(3) be privately held and not publicly traded;

(4) not be a major stationary source;

(5) be subject to Regulation XIII and not Rule 2005(RECLAIM); and

(6) if legally affiliated with another business, the combined activities shall meet the above requirements.

A facility is a major stationary source if it is subject to Regulation XXX - Title V Permits based on subdivision (a) of Rule 3001 - Applicability or is a major polluting facility as determined in this regulation.

(gg) SOURCE means any permitted individual unit, piece of equipment, article, machine, process, contrivance, or combination thereof, which may emit or control an air contaminant. This includes any permit unit at any non-RECLAIM facility and any device at a RECLAIM facility.

(hh) SOUTHEAST DESERT AIR BASIN (SEDAB) means that portion of the air basin containing specific desert portions of Los Angeles, Riverside and San Bernardino counties, as defined in Title 17, California Code of Regulations, Section 60109, within the jurisdiction of the District.

(ii) VOLATILE ORGANIC COMPOUND (VOC) means any volatile compound of carbon, excluding acetone, methane, carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates, ammonium carbonates, ODCs, ethane, HCFC-124, HFC-125, HFC-134,HFC-143a, HFC-152a and perfluorocarbons listed under 40 CFR 51.100 (s) and exempt compounds.

8-28-96

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(Amended Sept. 10, 1982)(Amended July 12, 1985)(Amended August 1, 1986)
(Amended Dec. 2, 1988)(Amended June 28, 1990)(Amended May 3, 1991)
(Amended December 7, 1995)

RULE 1302. DEFINITIONS

(a) ACTUAL EMISSIONS means the emissions of a pollutant from an affected source determined by taking into account actual emission rates and actual or representative production rates (i.e., capacity utilization and hours of operation).

(b) AIR CONTAMINANT means any air pollutant for which there is a national ambient air quality standard, or precursor to such air pollutant, including but not limited to: carbon monoxide, sulfur dioxide, nitrogen oxides, particulate matter, lead compounds and volatile organic compounds.

(c) ALLOWABLE EMISSIONS means the emissions rate of a stationary source calculated using the maximum rated capacity of the source, unless the source is subject to federally enforceable limits which restrict the operation rate, or hours of operation, or both, and the most stringent of the following: (1) the applicable standards set forth in 40 CFR Part 60 or 61; (2) any applicable SIP emissions limitation including those with a future compliance date; or (3) the emissions rate specified as federally enforceable permit conditions including those with a future compliance date.

(d) BANKING means the process of recognizing and certifying emission reductions and the registering transaction involving Emission Reduction Credits.

(e) BASIN means the South Coast Air Basin or the nonattainment Planning Area of the Riverside County portion of the Southeast Desert Air Basin (SEDAB), or the remaining portion of the Riverside County SEDAB area, or the Los Angeles County SEDAB area within the South Coast Air Quality Management District (District). The boundaries of each air basin shall be as defined by the California Air Resources Board.

(f) BEST AVAILABLE CONTROL TECHNOLOGY (BACT) means the most stringent emission limitation or control technique which:

(1) has been achieved in practice for such category or class of source; or

(2) is contained in any state implementation plan (SIP) approved by the United States Environmental Protection Agency (EPA) for such category or class of source. A specific limitation or control technique shall not apply if the owner or operator of the proposed source demonstrates to the satisfaction of the Executive Officer or designee that such limitation or control technique is not presently achievable; or

(3) is any other emission limitation or control technique, found by the Executive Officer or designee to be technologically feasible for such class or category of sources or for a specific source, and cost-effective as compared to measures as listed in the Air Quality Management Plan (AQMP) or rules adopted by the District Governing Board.

(g) BEST AVAILABLE RETROFIT CONTROL TECHNOLOGY means 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.

(h) COGENERATION PROJECT means a project which:

(1) makes sequential use of exhaust steam, waste steam, heat or resultant energy from an industrial, commercial, or manufacturing plant or process for the generation of electricity; or

(2) makes sequential use of exhaust steam, waste steam, or heat from a thermal power plant, in an industrial, commercial, or manufacturing plant or process.

For the purposes of this definition, the "industrial, commercial or manufacturing plant or process" shall not be a thermal power plant or portion thereof. A cogeneration project shall not consist of steam or heat developed solely for electrical power generation. To qualify as a cogeneration project, the processes listed in (1) and (2) above must meet the conditions specified in Public Resources Code Section 25134.

(i) EMISSION LIMITATION is a federally enforceable permit condition limiting emissions from a discrete operation, unit or other pollutant emitting source.

(j) EMISSION REDUCTION CREDIT (ERC) means the amount of emissions reduction which is verified and determined to be eligible for credit at a facility in accordance with

all District rules and regulations. An ERC represents final eligible emission reductions and may be used as such, in accordance with the provisions of Regulation XIII.

(k) ESSENTIAL PUBLIC SERVICE includes:

(1) sewage treatment facilities, which are publicly owned or operated, and consistent with an approved regional growth plan;

(2) prisons;

(3) police facilities;

(4) fire fighting facilities;

(5) schools;

(6) hospitals;

(7) construction and operation of a landfill gas control or processing facility;

(8) water delivery operations; and

(9) public transit.

(l) EXEMPT COMPOUNDS include any of the following compounds:

methylene chloride
trifluoromethane(HFC-23)
pentafluoroethane(HFC-125)
1,1,2,2-tetrafluoroethane (HFC-134)
tetrafluoroethane(HFC-134a)
1,1,1-trifluoroethane(HFC-143a)
1,1-difluoroethane(HFC-152a)
chlorodifluoromethane(HCFC-22)
dichlorotrifluoroethane(HCFC-123)
2-chloro-1,1,1,2-tetrafluoroethane(HCFC-124)
dichlorofluoroethane(HCFC-141b)
chlorodifluoroethane(HCFC-142b)
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
sulfur-containing perfluorocarbons with no unsaturations and with sulfur bonds only to carbon and fluorine

volatile methyl siloxanes
parachlorobenzotrifluoride

(m) FACILITY means any source or group of sources or other air contaminant-emitting activities which are located on one or more contiguous properties within the District, in actual physical contact or separated solely by a public roadway or other public right-of-way, and are owned or operated by the same person (or by persons under common control), or an outer continental shelf (OCS) source as determined in 40 CFR Section 55.2. Such above-described groups, if noncontiguous, but connected only by land carrying a pipeline, shall not be considered one facility. Sources or installations involved in crude oil and gas production in Southern California Coastal or OCS Waters and transport of such crude oil and gas in Southern California Coastal or OCS Waters shall be included in the same facility which is under the same ownership or use entitlement as the crude oil and gas production facility on-shore.

(n) FEDERALLY ENFORCEABLE means all permit limitations and conditions which are enforceable by the EPA Administrator.

(o) MAJOR MODIFICATION means any modification, as specified in subdivision (s), at an existing major polluting facility that will cause;

(1) an increase of one pound per day or more, of the facility's potential to emit oxides of nitrogen (NO_X) or volatile organic compounds (VOCs), provided the facility is not located in the Southeast Desert Air Basin (SEDAB), or

(2) an increase of 40 tons per year or more, of the facility's potential to emit oxides of sulfur (SO_X), or

(3) an increase of 15 tons per year or more, of the facility's potential to emit particulate matter with an aerodynamic diameter of less than or equal to a nominal ten microns (PM_{10}); or,

(4) an increase of 100 tons per year or more, of the facility's potential to emit carbon monoxide (CO).

For an existing major polluting facility located in the SEDAB, major modification means any modification that will cause an increase of 25 tons per year or more, of the

facility's potential to emit NO_X or VOC; whereas the requirements for SO_X, PM_{10}, and CO are as specified above in paragraphs (o)(2), (o)(3), and (o)(4).

(p) MAJOR POLLUTING FACILITY means any facility not located in the SEDAB which emits or has the potential to emit the following amounts or more:

Volatile Organic Compounds (VOC)	(10) tons per year
Nitrogen Oxides (NO_x)	(10) tons per year
Sulfur Oxides (SO_x)	(70) tons per year
Particulate Matter (PM_{10})	(70) tons per year
Carbon Monoxide (CO)	(100) tons per year

For any facility located in the SEDAB, major polluting facility means any facility which emits or has the potential to emit the following amounts or more:

Volatile Organic Compounds (VOC)	(25) tons per year
Nitrogen Oxides (NO_x)	(25) tons per year
Sulfur Oxides (SO_x)	(100) tons per year
Particular Matter (PM_{10})	(70) tons per year
Carbon Monoxide (CO)	(100) tons per year

(q) MOBILE SOURCE means a device by which any person or property may be propelled, moved, or drawn upon a roadway, stationary rails or tracks, waterways, or through the atmosphere, and which emits air contaminants.

(r) MODELING means using an air quality simulation model, based on specified assumptions and data, and which model is approved by the EPA and has been approved in writing by the Executive Officer or designee.

(s) MODIFICATION means any physical change in equipment, change in method of operation, or an addition to an existing facility, which may cause the issuance of air contaminants. Routine maintenance and/or repair shall not be considered a physical change. A change in the method of operation of equipment, unless previously limited by an enforceable permit condition, shall not include:

(1) an increase in the production rate, unless such increase will cause the maximum design capacity of the equipment to be exceeded.

(2) an increase in the hours of operation.

(3) a change in operator of a facility.

(t) NEW SOURCE REVIEW (NSR) BALANCE means the sum of the emission increases, decreases, and offsets as listed in District records, and approved by the Executive Officer or designee that has been determined at a facility pursuant to the District's New Source Review rules since October 8, 1976 to December 7, 1995. Under no circumstances shall the New Source Review Balance be greater than the facility's potential to emit or less than zero.

(u) NONATTAINMENT AIR CONTAMINANT means any air contaminant for which there is a national or state ambient air quality standard, or precursor to such air contaminant, which:

(1) has been designated "nonattainment" pursuant to the California Air Resources Board in accordance with Section 39607 of California Health & Safety Code; or

(2) has been designated "nonattainment" pursuant to final rulemaking by the EPA as published in the Federal Register.

(v) OZONE DEPLETING COMPOUNDS (ODCs) are Class I substances identified in 40 CFR, Part 82, Appendix A, Subpart A, including, but not limited to the following compounds:

1,1,1-trichloroethane (methyl chloroform)
trichlorotrifluoroethane (CFC-113)
dichlorodifluoromethane (CFC-12)
trichlorofluoromethane (CFC-11)
dichlorotetrafluoroethane (CFC-114)
chloropentafluoroethane (CFC-115)

(w) PERMANENT means that emission reductions used to offset emission increases are assured for the life of the corresponding increase, whether unlimited or limited in duration.

(x) PERMIT UNIT means any article, machine, equipment, or other contrivance, or combination thereof, which may cause or control the issuance of air contaminants that is not exempt from permit requirements.

(y) POTENTIAL TO EMIT means the amount of pollutants calculated (1) using a calendar monthly average, and, (2) on a pound-per-day basis from permit conditions which directly limit the emissions, or, when no such conditions are imposed, from:

(1) the maximum rated capacity; and

(2) the maximum daily hours of operation; and

(3) the physical characteristics of the materials processed.

Fugitive emissions associated with the source shall be included in the potential to emit.

(z) PM_{10} means particulate matter with aerodynamic diameter of less than or equal to a nominal 10 microns as measured by an applicable reference test method.

(aa) PRECURSOR means a substance that, when released to the atmosphere, forms or causes to be formed or contributes to the formation of another or secondary air contaminant for which a national ambient air quality standard has been adopted, or whose presence in the atmosphere will contribute to the violation of one or more national ambient air quality standards. Precursors and secondary pollutants include:

PRECURSORS	SECONDARY POLLUTANTS
Volatile Organic Compounds (VOC)	a) photochemical oxidant (ozone)
	b) the organic fraction of suspended particulate matter
Nitrogen Oxides (NO_x)	a) nitrogen dioxide (NO_2)
	b) the nitrate fraction of suspended particulate matter
	c) photochemical oxidant (ozone)

Sulfur Oxides (SO_X)	a) Sulfur dioxide (SO_2) b) sulfates (SO_4) c) the sulfate fraction of suspended particulate matter

(bb) QUALIFYING FACILITY means a power generating facility which:

(1) produces electric energy solely by the use, as a primary energy source, of biomass, waste, renewable resources, geothermal resources, or any combination thereof; and

(2) has a power production capacity which, together with any other facilities located at the same site, is not greater than 80 megawatts; and

(3) is determined by the Federal Energy Regulatory Commission (FERC), by rule, to meet such requirements (including fuel use, fuel efficiency, and reliability) as the Commission may, by rule, prescribe; and

(4) is owned by a person not primarily engaged in the generation or sale of electric power, other than electric power solely from cogeneration facilities or facilities meeting the provisions of subparagraphs (1) and (2).

(cc) QUANTIFIABLE EMISSIONS means that the emission reductions eligible for ERCs were calculated both before and after the reduction using the same method and averaging time.

(dd) RELOCATION means the removal of an existing source from one parcel of land in the District and installation on another parcel of land where the two parcels are not in actual physical contact and are not separated solely by a public roadway or other public right-of-way.

(ee) RESOURCE RECOVERY PROJECT means a project which uses municipal waste, refuse-derived, biomass-derived or other nonfossil fuels for useful energy generation within the same basin that the fuel was generated.

(ff) SMALL BUSINESS means for BACT determination purposes only, any business which meets all of the following criteria:

(1) the number of employees is 100 or less;

(2) the total gross annual receipts are $2,000,000 or less;

(3) be privately held and not publicly traded;

(4) not be a major stationary source;

(5) be subject to Regulation XIII and not Rule 2005(RECLAIM); and

(6) if legally affiliated with another business, the combined activities shall meet the above requirements.

A facility is a major stationary source if it is subject to Regulation XXX - Title V Permits based on subdivision (a) of Rule 3001 - Applicability or is a major polluting facility as determined in this regulation.

(gg) SOURCE means any permitted individual unit, piece of equipment, article, machine, process, contrivance, or combination thereof, which may emit or control an air contaminant. This includes any permit unit at any non-RECLAIM facility and any device at a RECLAIM facility.

(hh) SOUTHEAST DESERT AIR BASIN (SEDAB) means that portion of the air basin containing specific desert portions of Los Angeles, Riverside and San Bernardino counties, as defined in Title 17, California Code of Regulations, Section 60109, within the jurisdiction of the District.

(ii) VOLATILE ORGANIC COMPOUND (VOC) means any volatile compound of carbon, excluding acetone, methane, carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates, ammonium carbonates, ODCs, ethane, HCFC-124, HFC-125, HFC-134,HFC-143a, HFC-152a and perfluorocarbons listed under 40 CFR 51.100 (s) and exempt compounds.

RULE 1303. - REQUIREMENTS

(Adopted Oct. 5, 1979)(Amended March 7, 1980)(Amended Sept. 10, 1982)
(Amended July 12, 1985)(Amended August 1, 1986)(Amended June 28, 1990)
(Amended May 3, 1991)(Amended December 7, 1995)(Amended May 10, 1996)

(a) Best Available Control Technology:

1. The Executive Officer or designee shall deny the Permit to Construct for any relocation or for any new or modified source which results in an emission increase of any nonattainment air contaminant, any ozone depleting compound, or ammonia, unless Best Available Control Technology is employed for the new or relocated source or for the actual modification to an existing source.
2. In implementing subdivision (a), the Executive Officer or designee shall periodically publish guidelines indicating the administrative procedures and requirements for commonly permitted sources. Best Available Control Technology for other source categories shall be determined on a case-by-case basis using the definition of Best Available Control Technology in Rule 1302 and the general administrative procedures and requirements of the Best Available Control Technology Guidelines.
3. Where the requirement of paragraph (a)(1) is applicable to a small business that is not a major polluting facility, the Executive Officer or designee shall consider cost in determining the level of Best Available Control Technology required for new or modified sources at such a facility, provided that the applicant fully substantiates his eligibility as a small business as defined in Rule 1302. Notwithstanding the preceding sentence, Best Available Control Technology for such sources shall be at least as stringent as Lowest Achievable Emission Rate as defined in the federal Clean Air Act Section 171(3) [42 U.S.C. Section 7501(3)].
4. The Best Available Control Technology requirements of this paragraph shall apply regardless of any modeling or offset exemption in Rule 1304.

(b) The Executive Officer or designee shall, except as Rule 1304 applies, deny the Permit to Construct for any new or modified source which results in a net emission increase of any nonattainment air contaminant at a facility, unless each of the following requirements is met:

1. Modeling
   The applicant substantiates with modeling, according to Appendix A or other analysis approved by the Executive Officer or designee, that the new facility or modification will not cause a significant increase in an air quality concentration as specified in Table A-2 of Appendix A.
2. Emission Offsets
   Unless exempt from offsets requirements pursuant to Rule 1304, emission increases shall be offset by either Emission Reduction Credits approved pursuant to Rule 1309, or by allocations from the Priority Reserve in accordance with the provisions of Rule 1309.1. Offset ratios shall be 1.2-to-1.0 for Emission Reduction Credits and 1.0-to-1.0 for allocations from the Priority Reserve, except for facilities located in the Southeast Desert Air Basin, where the offset ratio for Emission Reduction Credits only shall be 1.2-to-1.0 for VOC, NO_X, $SO_X$and PM10 and 1.0-to-1.0 for CO.
3. Sensitive Zone Requirements
   Unless credits are obtained from the Priority Reserve, facilities located in the South Coast Air Basin are subject to the Sensitive Zone requirements specified in Health and Safety Code Section 40410.5. A facility in zone 1 may obtain Emission Reduction Credits originated in zone 1 only, and a facility in zone 2A may obtain Emission Reduction Credits from either zone 1 or zone 2A, or both, or demonstrate to the Executive Officer or designee a net air quality benefit in the area impacted by the emissions from the subject facility.
4. Facility Compliance
   The subject facility complies with all applicable rules and regulations of the District.

5. Major Polluting Facilities

In addition to the above requirements, any new major polluting facility or major modification at an existing major polluting facility shall comply with the following requirements:

(A) Alternative Analysis

Conduct an analysis of alternative sites, sizes, production processes, and environmental control techniques for such proposed source and demonstrate that the benefits of the proposed project outweigh the environmental and social costs associated with that project.

(B) Statewide Compliance

Demonstrate prior to the issuance of a Permit to Construct, that all major stationary sources, as defined in the jurisdiction where the facilities are located, that are owned or operated by such person (or by any entity controlling, controlled by, or under common control with such person) in the State of California are subject to emission limitations and are in compliance or on a schedule for compliance with all applicable emission limitations and standards under the Clean Air Act.

(C) Protection of Visibility

(i) Conduct a modeling analysis for plume visibility in accordance with the procedures specified in Appendix B if the net emission increase from the new or modified source exceeds 15 tons/year of PM_{10} or 40 tons/year of NO_X; and the location of the source, relative to the closest boundary of a specified Federal Class I area, is within the distance specified in Table C-1.

Table C-1

Federal Class I Area	*Distance (km)*
Agua Tibia	28
Cucamonga	28
Joshua Tree	29
San Gabriel	29
San Gorgonio	32
San Jacinto	28

(ii) In relation to a permit application subject to the modeling analysis required by clause (b)(5)(C)(i), the Executive Officer shall:

(I) deem a permit application complete only when the applicant has complied with the requisite modeling analysis for plume visibility pursuant to clause (b)(5)(C)(i);

(II) notify and provide a copy of the complete permit application file to the applicable Federal Land Manager(s) within 30 calendar days after the application has been deemed complete and at least 60 days prior to final action on the permit application;

(III) consider written comments, relative to visibility impacts from the new or modified source,

from the responsible Federal Land Manager(s), including any regional haze modeling performed by the Federal Land Manager(s), received within 30 days of the date of notification, when determining the terms and conditions of the permit;

(IV) consider the Federal Land Manager(s) findings with respect to the geographic extent, intensity, duration, frequency and time of any identified visibility impairment of an affected Federal Class I area, including how these factors correlate with times of visitor use of the Federal Class I area, and the frequency and timing of natural conditions that reduce visibility; and,

(V) explain its decision or give notice as to where to obtain this explanation if the Executive Officer finds that the Federal Land Manager(s) analysis does not demonstrate that a new or modified source may have an adverse impact on visibility in an affected Federal Class I area.

(iii) If a project has an adverse impact on visibility in an affected Federal Class I area, the Executive Officer may consider the cost of compliance, the time necessary for compliance, the energy and non-air quality environmental impacts of compliance, and the useful life of the source and other relevant factors in determining whether to issue or deny the Permit to Construct or Permit to Operate.

(D) Compliance Through California Environmental Quality Act
The requirements of subparagraph (b)(5)(A) may be met through compliance with the California Environmental Quality Act in the following manner:

(i) if the proposed project is exempt from California Environmental Quality Act analysis pursuant to a statutory or categorical exemption pursuant to Title 14, California Code of Regulations Sections 15260 to 15329, subparagraph (b)(5)(A) shall not apply to that project;

(ii) if the proposed project qualifies for a negative declaration pursuant to Title 14 California Code of Regulations Section 15070, or for a mitigated negative declaration as defined in Public Resources Code Section 21064.5; subparagraph (b)(5)(A) shall not apply to that project, or

(iii) the proposed project has been analyzed by an environmental impact report pursuant to Public Resources Code Section 21002.1 and Title 14 California Code of Regulations Section 15080 et seq., subparagraph (b)(5)(A) shall be deemed to be satisfied.

APPENDIX A

The following sets forth the procedure for complying with the air quality modeling requirements of Rule 1303(b). An applicant must either (1) provide an analysis, approved by the Executive Officer or designee, or (2) show by using the Screening Analysis below, that a significant increase in air quality concentration will not occur. Modeling for VOC and $SO_X$is not required.

Table A-1 of the screening analysis is subject to change by the Executive Officer or designee, based on improved modeling data.

SCREENING ANALYSIS

Compare the emissions from the source you are applying for to those in Table A-1. If the emissions are less than the allowable emissions, no further analysis is required. If the emissions are greater than the allowable emissions, a more detailed air quality modeling analysis is required.

Table A-1
Allowable Emissions

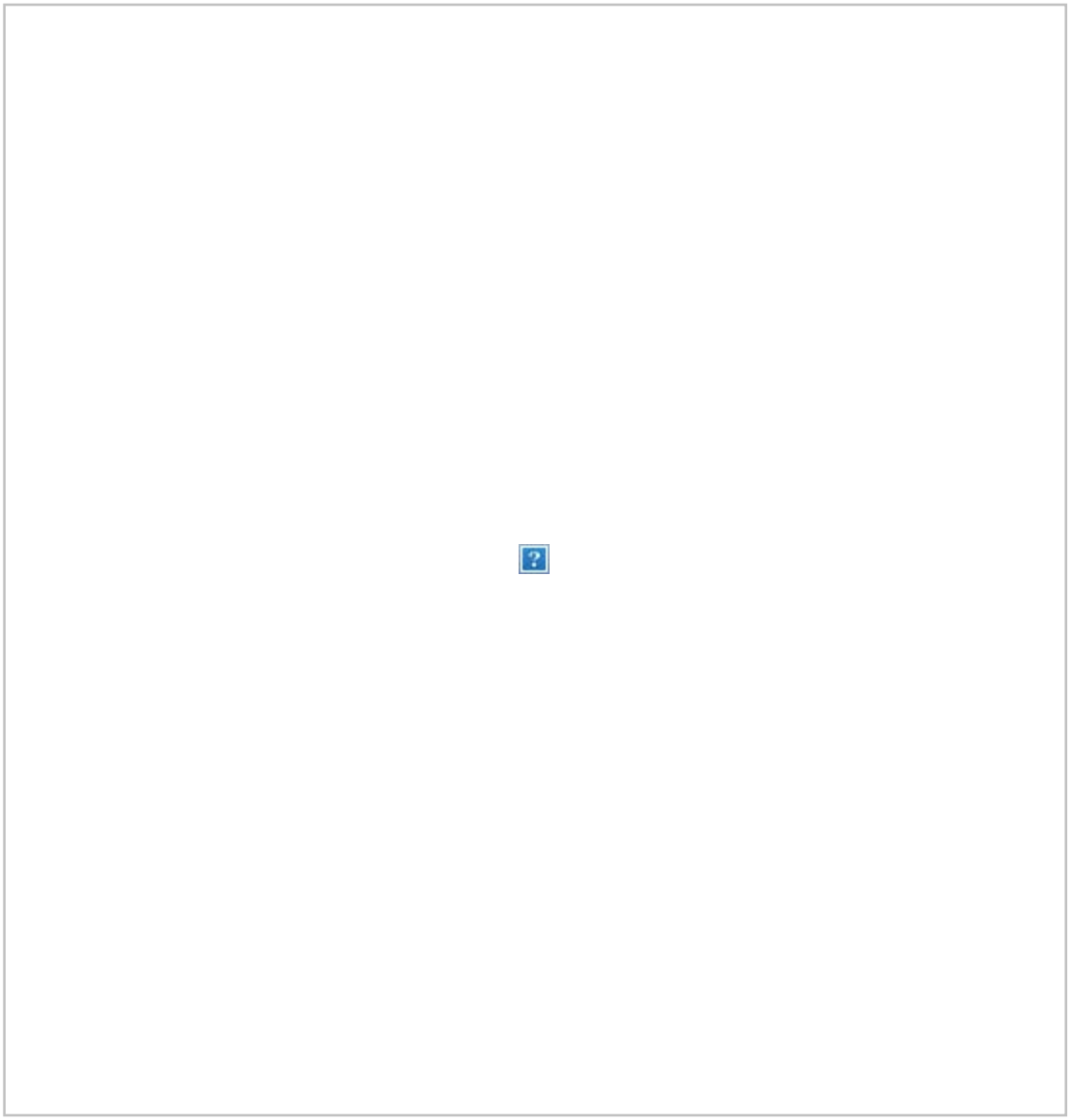
for Noncombustion Sources and for
Combustion Sources less than or equal to 40 Million BTUs per hour

Heat Input Capacity NOx CO PM10 (million BTUs/hr)	NO_x (lbs/hr)	CO (lbs/hr)	PM_{10} (lbs/hr)
Noncombustion Source	0.068	3.7	0.41
< 2	0.20	11.0	1.2
>2 < 5	0.31	17.1	1.9
>5 < 10	0.47	25.9	2.8
>10 < 20	0.86	47.3	5.2
>20 < 30	1.26	69.3	7.6
>30 ≤40	1.31	72.1	7.9

TABLE A-2

Most Stringent Ambient Air Quality Standard and
Allowable Change in Concentration
For Each Air Contaminant/Averaging Time Combination

Air Contaminant	Averaging Time	Most Stringent Air Quality Standard	Significant Change in Air Quality Concentration
Nitrogen Dioxide	1-hour	25 pphm - 500 µg/m^3	1 pphm - 20 µg/m^3
	Annual	5.3 pphm - 100 µg/m^3	0.05 pphm - 1 µg/m^3
Carbon Monoxide	1-hour	20 ppm - 23 mg/m^3	1 ppm - 1.1 mg/m^3
	8-hour	9.0 ppm - 10 mg/m^3	0.45 ppm - 0.50 mg/m^3
Suspended Particulate	24-hour	50 µg/m^3	2.5 µg/m^3
Matter-<10um (PM10)	Annual Geometric Mean	30 µg/m^3	1 µg/m^3
Sulfate	24-hour	25 µg/m^3	1 µg/m^3



APPENDIX B
MODELING ANALYSIS FOR VISIBILITY

(a) The modeling analysis performed by the applicant shall consider:

1. the net emission increase from the new or modified source; and
2. the location of the source and its distance to the closest boundary of specified Federal Class I area(s).

(b) Level 1 and 2 screening analysis for adverse plume impact pursuant to subparagraph (b)(5)(C) of this rule for modeling analysis of plume visibility shall consider the following applicable screening background visual ranges:

Federal Class I Area	**Screening Background Visual Range (km)**
Agua Tibia	171
Cucamonga	171
Joshua Tree	180
San Gabriel	175
San Gorgonio	192

For level 1 and 2 screening analysis, no adverse plume impact on visibility results when the total color contrast value (Delta-E) is 2.0 or less and the plume contrast value (C) is 0.05 or less. If these values are exceeded, the Executive Officer shall require additional modeling. For level 3 analysis the appropriate background visual range, in consultation with the Executive Officer, shall be used. The Executive Officer may determine that there is no adverse visibility impact based on substantial evidence provided by the project applicant.

(c) When more detailed modeling is required to determine the project's visibility impact or when an air quality model specified in the Guidelines below is deemed inappropriate by the Executive Officer for a specific source-receptor application, the model may be modified or another model substituted with prior written approval by the Executive Officer, in consultation with the federal Environmental Protection Agency and the Federal Land Managers.

(d) The modeling analysis for plume visibility required pursuant to subparagraph (b)(5)(C) of this rule shall comply with the most recent version of:

1. "Guideline on Air Quality Model (Revised)" (1986), supplement A (1987), supplement B (1993) and supplement C (1994), EPA-450/2-78-027R, US EPA, Office of Air Quality Planning and Standards Research Triangle Park, NC 27711; and
2. "Workbook for Plume Visual Impact Screening and Analysis (Revised)," EPA-454-/R-92-023, US EPA, Office of Air Quality Planning and Standards, Research Triangle Park, NC 27711;
3. "User's Manual for the Plume Visibility Model (PLUVUE II) (Revised)," EPA-454/B-92-008, US EPA, Office of Air Quality Planning and Standards, Research Triangle Park, NC 27711 (for Level-3 Visibility Analysis)

ANTELOPE VALLEY AIR POLLUTION CONTROL DISTRICT

RULE 1304. - EXEMPTIONS

(Adopted Oct. 5, 1979)(Amended March 7, 1980)(Amended Sept. 10, 1982)
(Amended July 12, 1985)(Amended Jan. 10, 1986)(Amended August 1, 1986)
(Amended June 28, 1990)(Amended May 3, 1991)(Amended June 5, 1992)
(Amended Sept. 11, 1992)(Amended December 7, 1995)(Amended June 14, 1996)

(a) Modeling and Offset Exemptions

Upon approval by the Executive Officer or designee, an exemption from the modeling requirement of Rule 1303 (b)(1) and the offset requirement of Rule 1303 (b)(2) shall be allowed, for the following sources.

1. Replacements
   The source is replacing a functionally identical source or is a functionally identical modification to a source and there is no increase in maximum rating, and the potential to emit of any air contaminant will not be greater from the new source than from the replaced source, when the replaced source was operated at the same conditions and as if current BACT were applied.
2. Electric Utility Steam Boiler Replacement
   The source is replacement of electric utility steam boiler(s) with combined cycle gas turbine(s), intercooled, chemically-recuperated gas turbines, other advanced gas turbine(s); solar, geothermal, or wind energy or other equipment, to the extent that such equipment will allow compliance with Rule 1135 or Regulation XX rules. The new equipment must have a maximum electrical power rating (in megawatts) that does not allow basinwide electricity generating capacity on a per-utility basis to increase. If there is an increase in basin-wide capacity, only the increased capacity must be offset.
3. Abrasive Blasting Equipment
   The source is portable abrasive blasting equipment complying with all state laws.
4. Emergency Equipment
   The source is exclusively used as emergency standby equipment for nonutility electrical power generation or any other emergency equipment as approved by the Executive Officer or designee, provided the source does not operate more than 200 hours per year as evidenced by an engine-hour meter or equivalent method.
5. Air Pollution Control Strategies
   The source is subjected to a modification or process change solely to reduce the issuance of air contaminants. This exemption shall not apply to landfill gas control operations or to any modification or process change made for the purpose of achieving regulatory compliance.
6. Emergencies
   The source is exclusively used in emergency operations, such as emergency soil decontamination or excavation, performed by, under the jurisdiction of, or pursuant to the requirements of, an authorized health officer, agricultural commissioner, fire protection officer, or other authorized agency officer. A person shall report any emergency within one hour of such emergency to the District or within one hour of the time said person knew or reasonably should have known of its occurrence. A specific time limit for each operation will be imposed.
7. Portable Equipment
   The source is periodically relocated, and is not located more than twelve consecutive months at any one facility in the District. The residency time of twelve consecutive months shall commence when the equipment is brought into the facility and placed into operation. This paragraph does not apply to portable internal combustion engines.
8. Portable Internal Combustion Engines
   The source is periodically relocated, and is not located more than twelve consecutive months at any one facility in the District, provided that the provisions of subparagraphs (A) through (C) are met. For the purpose of this paragraph, the residency time of twelve months shall commence either when an engine is brought into the facility and placed into operation or removed from storage and placed into operation. The equipment owner or operator shall designate dedicated storage areas within the facility and demonstrate compliance with the residency time requirement by keeping records that show the equipment location and operation history. Such records shall be kept on site for at least two years and made available to the Executive Officer upon request.

   (A) Emissions from the engine, by itself, do not cause an exceedance of any ambient air quality standard;

(B) Emissions from the engine do not exceed the following limits:
Volatile Organic Compounds (VOC) 55 pounds per day
Nitrogen Oxides (NO_x) 55 pounds per day
Sulfur Oxides (SO_x) 150 pounds per day
Particulate Matter (PM_{10}) 150 pounds per day
Carbon Monoxide (CO) 550 pounds per day

(C) For an engine located in the SEDAB the following limits shall apply:
Volatile Organic Compounds (VOC) 75 pounds per day
Nitrogen Oxides (NO_x) 100 pounds per day
Sulfur Oxides (SO_x) 150 pounds per day
Particulate Matter (PM_{10}) 150 pounds per day
Carbon Monoxide (CO) 550 pounds per day

(b) Intra-Facility Portable Equipment

1. Upon approval by the Executive Officer or designee, using the criteria set forth below, internal combustion engines and gas turbines which must be periodically moved within a facility because of the nature of their operation shall be exempt from the allowable change in air quality concentration requirements as stated in Rule 1303 paragraph (b)(1), provided that all of the following conditions are met:
   (A) The engine or turbine is used:

   (i) to remediate soil or groundwater contamination as required by federal, state, or local law or by a judicial or administrative order; or

   (ii) for flight-line operations.

   (B) The engine or turbine is not periodically moved solely for the purpose of qualifying for this exemption.

   (C) Emissions from the engine, by itself, do not cause an exceedance of any ambient air quality standard.

   (D) Emissions from the engine do not exceed the following limits:
   Volatile Organic Compounds(VOC) 55 pounds per day
   Nitrogen Oxides (NO_x) 55 pounds per day
   Sulfur Oxides (SO_x) 150 pounds per day
   Particulate Matter (PM_{10}) 150 pounds per day
   Carbon Monoxide (CO) 550 pounds per day

   (E) For an engine located in the SEDAB the following limits shall apply:
   Volatile Organic Compounds (VOC) 75 pounds per day
   Nitrogen Oxides (NO_x) 100 pounds per day
   Sulfur Oxides (SO_x) 150 pounds per day
   Particulate Matter (PM_{10}) 150 pounds per day
   Carbon Monoxide (CO) 550 pounds per day

2. For the purpose of clause (b)(1)(A)(ii), flight-line operations mean operations for the ground support of military and commercial aircraft, and includes, but is not limited to, the operation of power-generating internal combustion engines and gas turbines used to support aircraft systems or start up aircraft power plants.

(c) Offset Exemptions

Upon approval by the Executive Officer or designee, an exemption from the offset requirement of Rule 1303(b)(2) shall be allowed, for the following sources.

1. Relocations
   The source is a relocation of an existing source within the District, under the same operator and ownership, and provided that the potential to emit of any air contaminant will not be greater at the new location than at the previous location when the source is operated at the same conditions and as if current BACT were applied. The relocation shall also meet either the location requirements specified in Rule 1303(b)(3), or the applicant must demonstrate to the Executive Officer or designee a net air quality benefit in the area to which the facility will locate.

   In addition, the potential to emit of the combined facility for any air contaminant after the relocation shall be less than the amounts in Table A of Rule 1304 (d) whenever either the relocating facility or existing facility received the facility offset exemption pursuant to Rule 1304(d).

2. Concurrent Facility Modification
   The source is part of a concurrent facility modification with ~~an~~ emission reductions occurring after the submittal of an application for a permit to construct a new or modified source, but before the start of operation of the source, provided that it results in a net emission decrease, as determined by Rule 1306, and that the same emission reductions are not:

   (A) required by a Control Measure of the AQMP which has been assigned a target implementation date; or

   (B) required by a proposed District rule for which the first public workshop to consider such a rule has been conducted. This exclusion shall remain in effect for 12 months from the date of the workshop, or until the Executive Officer or designee determines that the proposed rule is abandoned; or

   (C) required by an adopted federal, State, or District rule, regulation or statute; or

   (D) from a category or class of equipment included in a demonstration program required by a District rule or regulation.

3. Resource Recovery and Energy Conservation Projects
   The source is a cogeneration technology project, resource recovery project or qualifying facility, as defined in Health and Safety Code Sections 39019.5, 39019.6, 39047.5 and 39050.5, to the extent required by state law, including Health and Safety Code Sections 42314, 42314.1, 42314.5, 41605, and 41605.5. In no case shall these sections provide an exemption from federal law.
4. Regulatory Compliance
   The source is installed or modified solely to comply with District, state, or federal air pollution control laws, rules, regulations or orders, as approved by the Executive Officer or designee, and provided there is no increase in maximum rating.
5. Regulatory Compliance for Essential Public Services
   The source is installed or modified at an Essential Public Service solely to comply with District, state, or federal pollution control laws, rules, regulations or orders, and verification of such is provided to the Executive Officer or designee; and sufficient offsets are not available in the Priority Reserve.
6. Replacement of Ozone Depleting Compounds (ODCs)
   The source is installed or modified exclusively for the replacement of ODCs, provided the replacement is performed in accordance with the District's ODC Replacement Guidelines. The Executive Officer or designee shall publish and update, as required, such guidelines indicating the administrative procedures and requirements for the replacement of ODCs. The ODC Replacement Guidelines shall ensure to the extent possible that:

   (A) the replacements minimize emission increases of VOC, or optimize such emission increases if there is a potential conflict with the requirements of subparagraphs (B), (C) or (D);

   (B) the replacements are not toxic, as determined and published by the California Air Resources Board (ARB) or the federal EPA, unless no other alternatives are available;

   (C) the replacements do not increase the emissions of other criteria pollutants or global warming compounds; and

(D) there are no adverse or irreversible water quality impacts through the use of such replacements.

7. Methyl Bromide Fumigation
   Any equipment or tarpaulin enclosures installed or constructed exclusively for fumigation using methyl bromide.

(d) Facility Exemption

1. New Facility
   (A) Any new facility that has a potential to emit less than the amounts in Table A shall be exempt from Rule 1303 (b)(2).

   (B) Any new facility that has a potential to emit equal to or more than the amounts in Table A shall offset the total amount of emission increase pursuant to Rule 1303 (b)(2).

2. Modified Facility
   (A) Any modified facility that has a post-modification potential to emit less than the amounts in Table A shall be exempt from Rule 1303 (b)(2).

   (B) Any modified facility that has a post-modification potential to emit equal to or more than the amounts in Table A shall be required to obtain offsets for the corresponding emissions increase, or the amount in excess of Table A figuresif the pre-modification potential to emit was less than the amounts in Table A in accordance with Rule 1303 (b)(2).

TABLE A

Pollutant	**Emissions in Tons per Year**
Volatile Organic Compounds (VOC)	4
Nitrogen Oxides (NO_X)	4
Sulfur Oxides (SO_X)	4
Particulate Matter (PM_{10})	4
Carbon Monoxide (CO)	29

3. Determination of emissions pursuant to Table A shall include emissions from permitted equipment excluding Rule 219 equipment not subject to NSR and shall also include emissions from all registered equipment except equipment registered pursuant to Rule 2100.
4. Emission Increases
   Emission increases shall be determined pursuant to Rule 1306(b).
5. Two-Year Limit on New Facility Exemption
   Any new facility with accumulated emission increases in excess of the amounts in Table A due to permit actions within any two-year period after the date of adoption of this rule shall offset the total emission increases during such period to zero.

(e) Emission Reduction Credits Related to Positive NSR Balances

Facilities that previously provided Emission Reduction Credits for the purpose of complying with the requirement to offset positive NSR balances pursuant to Rule 1303(b)(2) after October 1, 1990 shall receive Emission Reduction Credits equal to the amount previously provided to offset their pre-modification positive NSR balance.

RULE 1306. EMISSION CALCULATIONS

(Adopted Oct. 5, 1979)(Amended March 7, 1980)(Amended Sept. 10, 1982)
(Amended Dec. 3, 1982)(Amended July 12, 1985)(Amended August 1, 1986)
(Amended Sept. 5, 1986)(Amended June 28, 1990)(Amended May 3, 1991)
(Amended December 7, 1995)(Amended June 14, 1996)

(a) General

This rule shall be used as the basis for calculating applicability of Regulation XIII as stated in Rule 1301(b) and Rule 1303. This rule shall also be the basis for calculating daily emission increases and decreases used for offset requirements and Emission Reduction Credits.

(b) Emission Increases

Emission increases for new sources and the new total emissions for modified sources shall be calculated, as approved by the Executive Officer or designee, (1) using calendar monthly emissions divided by 30 for determination of the required amount of offsets, and (2) on a pound per day basis for determination of BACT and modeling applicability, from permit conditions which directly limit the emissions or, when no such conditions are imposed, from:

1. the maximum rated capacity; and
2. the maximum daily or monthly hours of operation as applicable; and
3. the physical characteristics of the material processed.

(c) Emission Decreases

Emission decreases from sources which are modified or removed from service shall be the actual emissions reduced to the amount which would be actual if current BACT were applied. The emission amount shall be calculated from the following:

1. The sum of actual emissions, as determined from company records, shall include annual emissions declarations pursuant to Rule 301, or other data approved by the Executive Officer or designee, whichever is less, which have occurred each year during the two-year period immediately preceding the date of permit application, or other appropriate period determined by the Executive Officer or designee to be representative of the source's cyclical operation, and consistent with federal requirements;
2. The sum of BACT adjusted annual emissions shall be divided by the total number of actual operation days in each of those two years or other approved period; and
3. The calculated amount from paragraphs (c)(1) and (c)(2) shall be multiplied by the usage factor appropriate to the use of the subject sources in each of the two years used for calculation, as follows:

   1.0 when operated 180 days or more,
   0.5 when operated 30 to 179 days, and
   0.0 when operated less than 30 days.

4. Daily emissions shall be determined for each year. The average value shall be calculated for those two years or other approved period.
   The BACT adjustment shall not apply to facilities located in the SEDAB.

(d) Determination of Required Offsets and BACT Applicability

This subdivision shall be used for determining the amount of required offsets pursuant to Rule 1303(b)(2), and BACT applicability pursuant to Rule 1303(a).

1. New Equipment Requiring a Permit (No Previous Permit).
   Emissions are calculated pursuant to Rule 1306(b).

2. Modification of Existing Source.
   Net emissions increase after the modification shall be calculated pursuant to Rule 1306(b) which is the post-modification potential to emit minus either:
   A. the permitted or allowable pre-modification potential to emit; or
   B. the actual emissions calculated pursuant to Rule 1306(c)(1) if the source was never subject to Rule 213 or Regulation XIII.

(e) Determination of Emission Reduction Credit

This paragraph shall be used for determining all Emission Reduction Credits.

1. All Modifications:
   Emission credit shall be based upon the new potential to emit calculated pursuant to Rule 1306(b) minus the decrease calculated pursuant to Rule 1306(c).
2. All Shutdowns:
   Emission credit shall be based upon the decrease calculated pursuant to Rule 1306(c).
3. The ERC shall equal the emission credit at the facility determined pursuant to paragraphs (e)(1) or (e)(2) minus the following:
   A. The NSR balance of the facility. The NSR balance must be zero for any ERC to be granted;
   B. All Community Bank allocations;
   C. All Priority Reserve allocations; and
   D. All offsets obtained pursuant to the exemption provisions of Rule 1304.
4. For the purpose of ERC determination in subparagraph (e)(3)(A) above, the NSR balance may be reduced from modifications and shutdowns by the amount of:
   A. the pre-modification potential to emit minus the post-modification potential to emit, for sources previously subject to Rule 213 or Regulation XIII; or
   B. the actual emissions calculated pursuant to Rule 1306(c) minus the post-modification potential to emit for sources never subject to Rule 213 or Regulation XIII.

   For shutdowns, the post-modification potential to emit is zero.

(f) Air Pollution Controls

For the modification of any source installed prior to October 8, 1976, resulting from the addition of air pollution controls installed solely to reduce the issuance of air contaminants, emissions shall be calculated, for purposes of Rule 1303 determination only, from permit conditions which directly limit the emissions or, when no such conditions are imposed, from:

1. the maximum rated capacity; and
2. the maximum proposed daily hours of operation; and
3. the physical characteristics of the materials processed.
   This subsection shall not be used to calculate an Emission Reduction Credit, which shall be determined by paragraphs (b), (c) and (e).

(g) Mobile Sources

The following mobile source emission increases or decreases directly associated with the subject sources shall be accumulated:

1. Emissions from in-plant vehicles; and
2. All emissions from ships during the loading or unloading of cargo and while at berth where the cargo is loaded or unloaded; and
3. Nonpropulsion ship emissions within Coastal Waters under District jurisdiction.

(h) PM10 Emissions

The PM10 emissions from an existing facility shall be calculated from the Total Suspended Particulate (TSP) emission increases and decreases which have occurred since October 8, 1976, using PM10 emission factors provided in the most

recent AQMD California Environmental Quality Act (CEQA) Air Quality Handbook or as approved by the Executive Officer or designee.

ANTELOPE VALLEY AIR POLLUTION CONTROL DISTRICT

RULE 1309. EMISSION REDUCTION CREDITS

(Adopted Sept. 10, 1982)(Amended Dec. 3, 1982)(Amended July 12, 1985)
(Amended June 28, 1990)(Amended May 3, 1991)(Amended August 13, 1993)
(Amended December 7, 1995)

This rule addresses the application, eligibility, registration, use, and transfer of Emission Reduction Credits (ERCs). These credits shall be used as offsets for emission increases at new or modified facilities that are subject to Rule 1303(b)(2).

(a) Validation of Existing, Qualifying Net Emission Decreases

1. Existing NSR Balances

   Facilities which according to District records have a net emission decrease since October 8, 1976, shall receive ERCs after the net emission decrease has been discounted by 80 percent and verified by the Executive Officer or designee. Upon validation, an ERC shall be registered in the Register of Titles as a current ERC.

2. Existing ERCs

   Any ERC based on an application which was deemed complete prior to September 28, 1990, resulting from the additional control of air contaminants through process changes or the installation of air pollution control equipment, unless included as an AQMP measure at the time, shall not be discounted. All other ERCs shall be discounted by 80 percent and reissued.

(b) Application for an ERC for a New Emission Reduction

In order to obtain an ERC, an application made in the form and along with supporting data and documents required by the Executive Officer or designee shall be submitted for each existing source that is to be modified or permanently taken out of service. The application shall be submitted no more than 90 days after the emission reduction occurs.

1. The Executive Officer or designee shall not deem an ERC application complete nor process such application unless and until the ERC applicant supplies supporting data and documents to the District, including but not limited to:
   A. the amount and type of emissions;
   B. the date on which the emission reduction took place or is planned to take place;
   C. the Regulation XIII zone from which the ERC is to originate;
   D. the reason for the emission reduction, such as a process change, addition of control equipment, or equipment or facility shutdown; and
   E. surrender of applicable District operating permits whenever emission reductions are the result of either equipment or facility shutdown.
2. The Executive Officer or designee shall notify the ERC applicant in writing within 30 calendar days of the receipt of the ERC application whether the application contains sufficient information to be deemed complete. Upon receipt of any additional information, a new 30-day period will begin, during which time the Executive Officer or designee shall determine and notify the applicant whether the application is complete. An application which continues to be deemed incomplete 180 days after the date of the first submittal shall be cancelled by the Executive Officer or designee. A determination of incompleteness may be appealed to the District Hearing Board.

3. Preliminary Decision
   No later than 180 days after the application for an ERC is deemed complete, a preliminary written decision shall be given that all, part, or none of the emission reductions can be registered as an ERC.

4. Emission Reduction Eligibility Requirements
   All Emission Reduction Credits shall be calculated pursuant to Rule 1306 and be subject to the approval of the Executive Officer or designee. The Executive Officer or designee shall consider reductions of air contaminants resulting from removal of equipment from service, and the additional control of mobile and stationary sources. The applicant must demonstrate to the Executive Officer or designee that all stationary and mobile source reductions are:
   A. real;
   B. quantifiable;
   C. permanent;
   D. federally enforceable, and
   E. not greater than the equipment would have achieved if operating with current Best Available Control Technology (BACT).

      Reductions in emissions due to changes in the hours of operation shall not qualify for an ERC.

      The BACT adjustment shall not apply to facilities located in the SEDAB.

5. Evaluation

   In evaluating the applications for ERC submitted pursuant to this regulation, the Executive Officer or designee shall consider emission reductions only if before a complete application is submitted, the same emission reductions from the same equipment type as those proposed by the applicant are not:

   A. required by a Control Measure in the AQMP which has been assigned a target implementation date; or
   B. required by a proposed District rule for which the first public workshop to consider such a rule has been conducted. This exclusion shall remain in effect for 12 months from the date of such workshop, or until the Executive Officer or designee determines that the proposed rule is abandoned or the provisions of subparagraph (5)(C) become effective; or
   C. required by an adopted federal, State, or District rule, regulation, or statute; or
   D. from a category or class of equipment included in a demonstration program required by a District rule or regulation.

(c) Registration of ERCs

Upon the Executive Officer's or designee's final determination to grant an ERC, the title to the ERC shall be registered in the Register of Title. All information concerning the title, interests, pertinent dates and other matters shall be registered, until the Certificate of Title is canceled or nullified by operation of law.

(d) Use of ERCs

ERCs may be used by the owner to offset emission increases due to new or modified sources of air pollution and to the extent allowed by federal law. An ERC shall qualify as an offset upon surrender of the Certificate to the District. Such ERC shall be used in a manner consistent with the Certificate record and in accordance with all other requirements of this regulation at the time of use, including the applicable offset ratio, determined pursuant to Rule 1303.

(e) Transfer of ERCs by Registered Owner

Transfer of the whole or any portion of an interest in a registered ERC is allowed, provided it is in writing, accompanied by the sale price of such ERCs, in dollars per pound, signed by the transferor, and acknowledged in any form authorized by law. Upon filing such instrument with the District, the transfer shall be complete and the title so transferred shall vest in the transferee. A new Certificate, certifying the title to the estate or interest in the ERC, shall be issued and the last previous original Certificate shall be cancelled. Such cancellation shall be recorded in the Register.

(f) Mobile Source Credit

Emission Reduction Credits shall be granted for emission reductions from the control of mobile sources pursuant to Regulation XVI rules.

1. ERCs may be issued based on emission reductions which comply with all requirements of any Regulation XVI rule.
2. Limitations

   (A) The Executive Officer or designee will approve plans for scrapping vehicles pursuant to Rule 1610, for no more than 30,000 vehicles per year.

   (B) Any permit to construct or operate a new or modified permit unit based upon ERCs obtained through the provisions of a Regulation XVI rule shall expire within the period for which the ERCs are issued, unless further emission offsets equal to or greater than such ERCs are obtained, or the subject permit unit's potential to emit is reduced to the extent that the ERCs granted pursuant to this paragraph would no longer be necessary.

   (C) Pursuant to Rule 504, no variance or series of variances, including emergency granting of a variance, from a permit condition implementing a Regulation XIII offset requirement shall be granted if such permit condition is based upon the use of MSERCs.

(g) Interpollutant Offsets

The Executive Officer or designee may approve interpollutant offsets on a case-by-case basis, provided that the trade results in an equivalent or greater offset of the new, modified, or relocated source's nonattainment pollutants; and that the applicant demonstrates, to the satisfaction of the Executive Officer or designee, that the emissions from the new or modified source will not cause or significantly contribute to the violation of an ambient air quality standard as specified in Table A-2.

Interpollutant trades between PM10 and PM10 precursors may be allowed. PM10 emissions shall not be allowed to offset NOx or ROG emissions in ozone nonattainment areas. All interpollutant trading shall be subject to EPA's review and approval.

(h) Inter-Basin and Inter-District Offsets

1. Offsets between different stationary sources located in different air control districts shall be allowed so long as the air districts are in the same air basin.
2. Offsets between different stationary sources located in different air basins shall be allowed only when:
   A. The stationary source to which the emission reductions are credited is located in an upwind district that is classified as being in a worse nonattainment status than the downwind district pursuant to Chapter 10 of the Health and Safety Code commencing with Section 40910; and
   B. The stationary source at which there are emission increases to be offset is located in a downwind district that is overwhelmingly impacted by emissions transported from the upwind district, as determined by the state board pursuant to Health and Safety Code Section 39610.
3. Any offset transaction credited pursuant to paragraphs (h)(1) and (h)(2) above shall be approved by resolution adopted by the Governing Board of the upwind district and the Governing Board of the downwind district. The adopting resolution shall consider the impact of the offset on air quality, public health, and the regional economy.

Nuisance: 6.30.12 L.A. COUNTY

Rule 51. Nuisance.

A person shall not discharge from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance or annoyance to any considerable number of persons or to the public or which endanger the comfort, repose, health or safety of any such persons or the public or which cause or have a natural tendency to cause injury or damage to business or property.

Disposal of Solid and Liquid Wastes: 6-30-72

Rule 58. Disposal of Solid and Liquid Wastes.

a. A person shall not burn any combustible refuse in any incinerator except in a multiple-chamber incinerator as described in Rule 102, or in equipment found by the Air Pollution Control Officer in advance of such use to be equally effective for the purpose of air pollution control as an approved multiple-chamber incinerator. Rule 58 (a) shall be effective in the Los Angeles Basin on the date of its adoption, and in the Upper Santa Clara River Valley Basin on January 1, 1972. In all other areas of Los Angeles County, this Rule shall be effective on January 1, 1973.

b. A person shall not discharge into the atmosphere from any incinerator or other equipment used to dispose of combustible refuse by burning, having design burning rates greater than 100 pounds per hour, except as provided in subsection (d) of this rule, particulate matter in excess of 0.1 grain per cubic foot of gas calculated to 12 per cent of carbon dioxide (CO_2) at standard conditions. Any carbon dioxide (CO_2) produced by combustion of any liquid or gaseous fuels shall be excluded from the calculation to 12 per cent of carbon dioxide (CO_2).

c. A person shall not discharge into the atmosphere from any equipment whatsoever, used to process combustible refuse, except as provided in subsection (d) of this rule, particulate matter in excess of 0.1 grain per cubic foot of gas calculated to 12 per cent of carbon dioxide (CO_2) at standard conditions. Any carbon dioxide (CO_2) produced by combustion of any liquid or gaseous fuels shall be excluded from the calculation to 12 per cent of carbon dioxide (CO_2).

d. A person shall not discharge into the atmosphere from any incinerator or other equipment used to dispose of combustible refuse by burning, having design burning rates of 100 pounds per hour or less, or for which an application for permit is filed before January 1, 1972, particulate matter in excess of 0.3 grain per cubic foot of gas calculated to 12 per cent of carbon dioxide (CO_2) at standard conditions and shall not discharge particles which are individually large enough to be visible while suspended in the atmosphere. Any carbon dioxide (CO_2) produced by combustion of any liquid or gaseous fuels shall be excluded from the calculation to 12 per cent of carbon dioxide (CO_2).

6.30.72

Disposal and Evaporation of Organic Solvents:

Rule 66.2.Disposal and Evaporation of Solvents

A person shall not during any one day dispose of a total of more than 1½ gallons of any photochemically reactive solvent, as defined in Rule 66(k), or of any material containing more than 1½ gallons of any such photochemically reactive solvent by any means which will permit the evaporation of such solvent into the atmosphere.

2.383

RESOLUTION NO. 82-23

A Resolution of the South Coast Air Quality Management District to include the Southeast Desert Air Basin portion of Los Angeles County within District jurisdiction.

WHEREAS, the Los Angeles County Board of Supervisors resolved by unanimous vote on June 1, 1982, to request the District to include the North Los Angeles County area within its jurisdiction; and

WHEREAS, the Lewis Air Quality Management Act, Chapter 5.5, Part 3, Division 26 of the Health and Safety Code (commencing with Section 40400) enables the District to resolve to include the SEDAB portion of the county upon a resolution of request from the Board of Supervisors; and

WHEREAS, the District currently provides air quality management services to the Los Angeles County Air Pollution Control District under contract; and

WHEREAS, inclusion of North Los Angeles County within the District will promote more efficient District air quality management operations; and

WHEREAS, inclusion of North Los Angeles County in the District will extend direct District planning, permitting and enforcement authority to this area and simplify administration; and

WHEREAS, precedent for this action exists through the earlier inclusion of the SEDAB portion of Riverside County in the District.

THEREFORE, BE IT RESOLVED that the South Coast Air Quality Management District Board hereby includes within the South Coast District that area of the County of Los Angeles not included within the South Coast Air Basin,

BE IT FURTHER RESOLVED that the Rules and Regulations of the Los Angeles County Air Pollution Control District shall remain in force in said area until amended or rescinded by the South Coast Air Quality Management District Board after a duly noticed public hearing.

AYES: Braude, Corbeil, McCandless, Meade, Eichhorn, Roth, Zaftman, and Heinsheimer

NOES: None

ABSENT: Doyle, Older

DATED: July 9, 1982

CLERK OF THE DISTRICT BOARD

RESOLUTION NO. 82- 35 2-3-83

A Resolution of the South Coast Air Quality Management District to adopt rules and regulations for the Southeast Desert Air Basin portion of Los Angeles County.

WHEREAS, the Board of the South Coast Air Quality Management District on July 9, 1982, adopted a Resolution to include the Los Angeles County Air Pollution Control District consisting of the Southeast Desert Air Basin portion of Los Angeles County into the South Coast Air Quality Management District; and

WHEREAS, the Board of the South Coast Air Quality Management District desires to adopt certain of the existing rules and regulations of the Air Quality Management District for the Southeast Desert Air Basin portion of Los Angeles County; and

WHEREAS, a public hearing has been properly noticed in accordance with the provisions of Health and Safety Code Section 40703; and

WHEREAS, the Board of the South Coast Air Quality Management District has held such hearing this date.

THEREFORE, BE IT RESOLVED that the Board of the South Coast Air Quality Management District does hereby adopt, pursuant to the authority granted in Health and Safety Code Section 40703, the existing rules and regulations of the South

Coast Air Quality Management District for the Southeast Desert Air Basin portion of Los Angeles County with the exception of Rule 1102, 1102.1, 461, and Regulation III and to rescind the existing rules and regulations of the Los Angeles County Air Pollution Control District with the exception of Regulation III.

BE IT FURTHER RESOLVED that staff is directed to present to the Board within six months proposals to adopt any other appropriate District rules and regulations for the Southeast Desert Air Basin portion of Los Angeles County.

AYES: Corbeil, Doyle, Eichhorn, McCandless, Meade, Older, Zafman and Heinsheimer

NOES: None

ABSENT: Braude and Roth

DATED: October 15, 1982

CLERK OF THE DISTRICT BOARD

RESOLUTION NO. 97-01

A RESOLUTION OF THE GOVERNING BOARD OF THE ANTELOPE VALLEY AIR POLLUTION CONTROL DISTRICT AFFIRMING THE RULES AND REGULATIONS OF THE SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT UNTIL THE ANTELOPE VALLEY AIR POLLUTION CONTROL DISTRICT ADOPTS NEW RULES AND REGULATIONS THAT SUPERCEDE THEM.

On July 1, 1997, on motion by Member ROBERTS, seconded by Member DAVIS, and carried, the following resolution is adopted:

WHEREAS, On July 1, 1997, California law creates the Antelope Valley Air Pollution Control District with specified structure, organization, duties, obligations and boundaries (A.B. 2666 (Knight); Chapter 542, Statutes of 1996; Health & Safety Code §40106); and

WHEREAS, Health & Safety Code §40106(e) requires that the Rules and Regulations of the South Coast Air Quality Management District remain in effect in Antelope Valley District until the Antelope Valley District adopts new Rules and Regulations which supersede them; and

WHEREAS, the creation of the Antelope Valley District and the legislative engendering of the South Coast District Rules and Regulation requires certain actions to be taken and certain administrative items to be clearly indicated; and

WHEREAS, these administrative items include, but are not limited to, stating that references in the Rules and Regulations to "South Coast Air Quality Management District" mean "Antelope Valley Air Pollution Control District" and references to "Executive Officer" mean "Air Pollution Control Officer" during the period such Rules and Regulations are effective in the Antelope Valley District.

NOW, THEREFORE, BE IT RESOLVED, that the Governing Board of the Antelope Valley District hereby affirms the Rules and Regulations of the South Coast District to be effective in the Antelope Valley District until Antelope Valley District adopts Rules and Regulations that supercede them; and

BE IT FURTHER RESOLVED, that references to the "South Coast Air Quality Management District" shall mean "Antelope Valley Air Pollution Control District" and "Executive Officer" shall mean "Air Pollution Control Officer" during the period such Rules and Regulations are effective in the Antelope Valley District, and

//

BE IT FURTHER RESOLVED, that any other similar administrative items within the Rules and Regulations, as necessary, is authorized to be indicated to enable the Antelope Valley District to carry out the purposes of the applicable provisions of Division 26 of the Health & Safety Code, as appropriate; and

BE IT FURTHER RESOLVED, that this resolution shall take effect immediately upon adoption.

PASSED, APPROVED AND ADOPTED by the Governing Board of the Antelope Valley Air Pollution Control District by the following vote:

AYES: **MEMBER(S):** ROBERTS, LAWSON, MYERS, DAVIES, HEARNS, MCCOY

NOES: **MEMBER(S):**

ABSENT: **MEMBER(S):**

ABSTAIN: **MEMBER(S):**

STATE OF CALIFORNIA)
)
COUNTY OF LOS ANGELES) ss:

I, LINDA BECK, Clerk of the Governing Board of the Antelope Valley Air Pollution Control District, hereby certify the foregoing to be a full, true and correct copy of the record of the action as the same appears in the Official Minutes of the Governing Board at its meeting on July 1, 1997.

, Clerk of the Governing Board, Antelope Valley Air Pollution Control District.

*20530 West's Ann.Cal.Health & Safety Code § 40106

WEST'S ANNOTATED CALIFORNIA CODES HEALTH AND SAFETY CODE DIVISION 26. AIR RESOURCES PART 3. AIR POLLUTION CONTROL DISTRICTS CHAPTER 2. COUNTY AIR POLLUTION CONTROL DISTRICTS ARTICLE 1. ADMINISTRATION

Current through end of 1995-96 Reg. Sess. and 1st-4th Ex. Sess.

§ 40106. Antelope Valley air pollution control district

< Operative July 1, 1997. >

(a) Notwithstanding Section 40410 or any other provision of this part, that portion of the Antelope Valley which is located in northern Los Angeles County shall not be within the south coast district. That territory shall constitute the territory of the Antelope Valley Air Pollution Control District, which is hereby created.

(b) The territory of the Antelope Valley Air Pollution Control District has the following boundaries: The San Bernardino County line to the east, the Kern County line to the north, the San Gabriel Mountains to the south, and the Sierra Nevada Mountains to the west. The south and west boundaries shall coincide with the boundaries of the Southeast Desert Air Basin, as determined in regulations of the state board.

(c) The Antelope Valley Air Pollution Control District shall be governed by a district board consisting of seven members, as follows:

(1) Two members of the City Council of the City of Lancaster appointed by the city council.

(2) Two members of the City Council of the City of Palmdale appointed by the city council.

(3) Two persons appointed by the member of the Board of Supervisors of the County of Los Angeles who represents a majority of the population of the Antelope Valley Air Pollution Control District, one of whom may be that supervisor.

(4) A public member who shall be appointed by the members who have been appointed pursuant to paragraphs (1) to (3), inclusive.

(d) Except as otherwise provided in this section, the Antelope Valley Air Pollution Control District is a county district.

(e) The rules and regulations of the south coast district shall remain in effect in the Antelope Valley Air Pollution Control District on and after July 1, 1997, until the Antelope Valley Air Pollution Control District board adopts new rules and regulations which supersede them.

(f) This section shall become operative on July 1, 1997.

***20531 CREDIT(S)**

1997 Electronic Update

(Added by Stats.1996, c. 542 (A.B.2666), § 1, operative July 1, 1997.)

<General Materials (GM) - References, Annotations, or Tables>

DESCRIPTION OF THE SOUTHWEST BOUNDARY OF THE ANTELOPE VALLEY APCD

This boundary is the boundary between the South Coast Air Basin and the Mojave Desert Air Basin that passes through Los Angeles County. The following description is contained in the California Code of Regulations, Title 17, section 60109(c):

Beginning at the Los Angeles-San Bernardino County boundary and running west along the township line common to T. 3 N and T. 2 N, San Bernardino Base and Meridian; then north along the range line common to R. 8 W and R. 9 W; then west along the township line common to T. 4 N and T. 3 N; then north along the range line common to R. 12 W and R. 13 W to the southeast corner of Section 12, T. 5 N, R. 13 W; then west along the south boundaries of Sections 12, 11, 10, 9, 8, 7, T. 5 N, R. 13 W to the boundary of the Angeles National Forest which is collinear with the range line common to R. 13 W and R. 14 W; then north and west along the Angeles National Forest boundary to the point of intersection with the township line common to T. 7 N and T. 6 N (point is at the northwest corner of Section 4 in T. 6 N, R. 14 W); then west along the township line common to T. 7 N and T. 6 N; then north along the range line common to R. 15 W and R. 16 W to the southeast corner of Section 13, T. 7 N, R. 16 W; then along the south boundaries of Sections 13, 14, 15, 16, 17, 18, T. 7 N, R. 16 W; then north along the range line common to R. 16 W and R. 17 W to the north boundary of the Angeles National Forest (collinear with township line common to T. 8 N and T. 7 N) then west and north along the Angeles National Forest boundary to the point of intersection with the south boundary of the Rancho La Liebre Land Grant; then west and north along this land grant boundary to the Los Angeles-Kern County boundary.

The attached Figure 1 is a map of Los Angeles County showing the above boundary line and the proposed Antelope Valley APCD. Figure 2 is a map of southern California identifying the Antelope Valley APCD with respect to neighboring air basins.

AMENDED IN ASSEMBLY MAY 2, 1996

AMENDED IN ASSEMBLY APRIL 11, 1996

CALIFORNIA LEGISLATURE—1995-96 REGULAR SESSION

ASSEMBLY BILL No. 2666

Introduced by Assembly Member Knight

February 22, 1996

An act to add Section 40106 to the Health and Safety Code, relating to air pollution.

LEGISLATIVE COUNSEL'S DIGEST

AB 2666, as amended, Knight. Air pollution: ~~districts:~~ Antelope Valley *Air Pollution Control District: creation.*

(1) Under existing law, there is a county air pollution control district in every county, unless the county is included within one of specified air pollution control districts or air quality management districts.

This bill would provide that the portion of the Antelope Valley which is located in northern Los Angeles County, as described in the bill, shall not be in the South Coast Air Quality Management District and shall *instead* constitute the territory of the ~~Los Angeles County~~ *Antelope Valley* Air Pollution Control District, which the bill would create. The bill would prescribe the composition of the district board *and would provide that the district is otherwise a county district.*

The bill would create a state-mandated local program by imposing new duties on the county.

CHAPTER 542

An act to add Section 40106 to the Health and Safety Code, relating to air pollution.

[Approved by Governor September 14, 1996. Filed with Secretary of State September 16, 1996.]

LEGISLATIVE COUNSEL'S DIGEST

AB 2666, Knight. Air pollution: Antelope Valley Air Pollution Control District: creation.

(1) Under existing law, there is a county air pollution control district in every county, unless the county is included within one of specified air pollution control districts or air quality management districts.

This bill would provide that, on and after July 1, 1997, the portion of the Antelope Valley that is located in northern Los Angeles County, as described in the bill, shall not be in the South Coast Air Quality Management District and shall instead constitute the territory of the Antelope Valley Air Pollution Control District, which the bill would create, and would prescribe related matters. The bill would prescribe the composition of the district board and would provide that the district is otherwise a county district.

The bill would create a state-mandated local program by imposing new duties on the county.

(2) The California Constitution requires the state to reimburse local agencies and school districts for certain costs mandated by the state. Statutory provisions establish procedures for making that reimbursement.

This bill would provide that no reimbursement is required by this act for a specified reason.

The people of the State of California do enact as follows:

SECTION 1. Section 40106 is added to the Health and Safety Code, to read:

40106. (a) Notwithstanding Section 40410 or any other provision of this part, that portion of the Antelope Valley which is located in northern Los Angeles County shall not be within the south coast district. That territory shall constitute the territory of the Antelope Valley Air Pollution Control District, which is hereby created.

(b) The territory of the Antelope Valley Air Pollution Control District has the following boundaries: The San Bernardino County line to the east, the Kern County line to the north, the San Gabriel

Mountains to the south, and the Sierra Nevada Mountains to the west. The south and west boundaries shall coincide with the boundaries of the Southeast Desert Air Basin, as determined in regulations of the state board.

(c) The Antelope Valley Air Pollution Control District shall be governed by a district board consisting of seven members, as follows:

(1) Two members of the City Council of the City of Lancaster appointed by the city council.

(2) Two members of the City Council of the City of Palmdale appointed by the city council.

(3) Two persons appointed by the member of the Board of Supervisors of the County of Los Angeles who represents a majority of the population of the Antelope Valley Air Pollution Control District, one of whom may be that supervisor.

(4) A public member who shall be appointed by the members who have been appointed pursuant to paragraphs (1) to (3), inclusive.

(d) Except as otherwise provided in this section, the Antelope Valley Air Pollution Control District is a county district.

(e) The rules and regulations of the south coast district shall remain in effect in the Antelope Valley Air Pollution Control District on and after July 1, 1997, until the Antelope Valley Air Pollution Control District board adopts new rules and regulations which supersede them.

(f) This section shall become operative on July 1, 1997.

SEC. 2. No reimbursement is required by this act pursuant to Section 6 of Article XIII B of the California Constitution because a local agency or school district has the authority to levy service charges, fees, or assessments sufficient to pay for the program or level of service mandated by this act, within the meaning of Section 17556 of the Government Code.

Notwithstanding Section 17580 of the Government Code, unless otherwise specified, the provisions of this act shall become operative on the same date that the act takes effect pursuant to the California Constitution.

O

(2) The California Constitution requires the state to reimburse local agencies and school districts for certain costs mandated by the state. Statutory provisions establish procedures for making that reimbursement.

This bill would provide that no reimbursement is required by this act for a specified reason.

Vote: majority. Appropriation: no. Fiscal committee: yes. State-mandated local program: yes.

The people of the State of California do enact as follows:

SECTION 1. Section 40106 is added to the Health and Safety Code, to read:

40106. (a) Notwithstanding Section 40410 or any other provision of this part, that portion of the Antelope Valley which is located in northern Los Angeles County shall not be within the south coast district. That territory shall constitute the territory of the ~~Los Angeles County~~ *Antelope Valley* Air Pollution Control District, which is hereby created. ~~The territory that is subject to this section shall have the~~

(b) The territory of the Antelope Valley Air Pollution Control District has the following boundaries: The San Bernardino County line to the east, the Kern County line to the north, the San Gabriel Mountains to the south, and the Sierra Nevada Mountains to the west. The south and west boundaries shall coincide with the boundaries of the Southeast Desert Air Basin, as determined in regulations of the state board.

~~(b) The Los Angeles County~~

(c) The Antelope Valley Air Pollution Control District shall be governed by a district board consisting of seven members, as follows:

(1) Two members of the City Council of the City of Lancaster appointed by the city council.

(2) Two members of the city council of the City of Palmdale appointed by the city council.

~~(3) The member of the Board of Supervisors of the County of Los Angeles who represents a majority of the population of the Los Angeles County Air Pollution Control District.~~

~~(4) A person appointed by the member of the Board of Supervisors of the County of Los Angeles designated in paragraph (3).~~

~~(5) A public member who shall be appointed by the members who have been appointed pursuant to paragraphs (1) to (4), inclusive.~~

(3) Two persons appointed by the member of the Board of Supervisors of the County of Los Angeles who represents a majority of the population of the Antelope Valley Air Pollution Control District, one of whom may be that supervisor.

(4) A public member who shall be appointed by the members who have been appointed pursuant to paragraphs (1) to (3), inclusive.

(d) Except as otherwise provided in this section, the Antelope Valley Air Pollution Control District is a county district.

SEC. 2. No reimbursement is required by this act pursuant to Section 6 of Article XIII B of the California Constitution because a local agency or school district has the authority to levy service charges, fees, or assessments sufficient to pay for the program or level of service mandated by this act, within the meaning of Section 17556 of the Government Code.

Notwithstanding Section 17580 of the Government Code, unless otherwise specified, the provisions of this act shall become operative on the same date that the act takes effect pursuant to the California Constitution.

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The attached Figure 1 is a map of Los Angeles County showing the above boundary line and the proposed Antelope Valley APCD. Figure 2 is a map of southern California identifying the Antelope Valley APCD with respect to neighboring air basins.

Figure 1

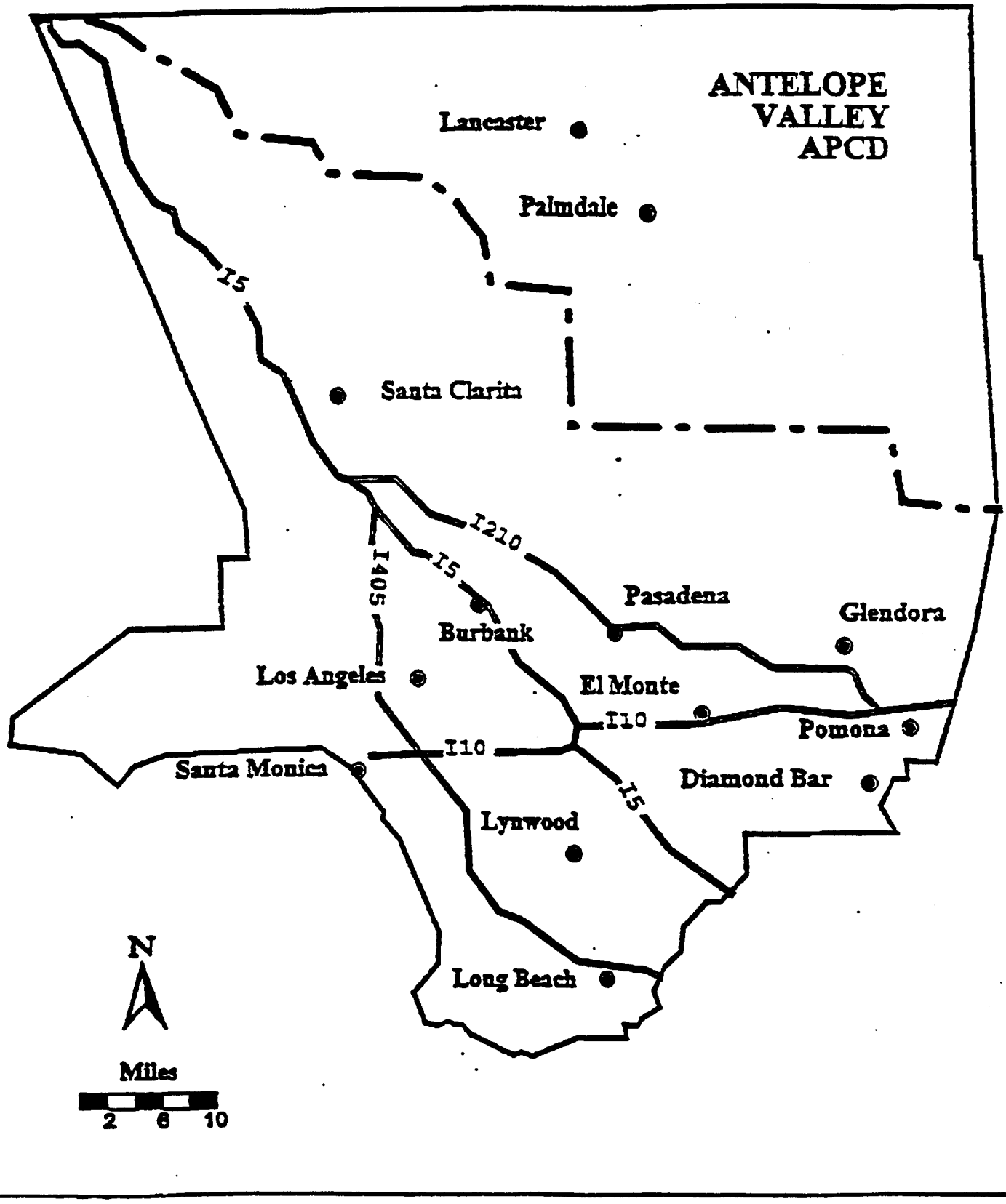
ANTELOPE VALLEY APCD
Lancaster
Palmdale
Santa Clarita
I5
I210
I405
I5
Pasadena
Glendora
Burbank
Los Angeles
El Monte
I10
Pomona
I10
Santa Monica
Diamond Bar
I5
Lynwood
Long Beach
N
Miles
2 6 10

FIGURE 2

Boundaries for Mojave Desert, Salton Sea, and South Coast Air Basins