SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

(Adopted February 4, 1977)(Amended April 1, 1977)

RULE 101. TITLE

These rules and regulations shall be known as the rules of the South Coast Air Quality Management District.

(Adopted February 4, 1977)(Amended April 1, 1977)(Amended September 2, 1977)
(Amended November 4, 1988)(Amended July 9, 1993)(Amended November 17, 1995)
(Amended June 13, 1997) (Amended March 13, 1998)(Amended June 12, 1998)
(Amended April 9, 1999)(Amended October 19, 2001)(Amended December 3, 2004)

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.

AGRICULTURAL BURNING means open outdoor fires used in agricultural operations in the growing of crops or raising of fowl 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.

AGRICULTURAL OPERATIONS means any operation occurring on a ranch or farm directly related to the growing of crops, or raising of fowl or animals for the primary purpose of making a profit or for a livelihood.

AGRICULTURAL PERMIT UNIT means any article, machine, equipment or other contrivance or combination thereof operated at an agricultural source, which is an agricultural operation and may cause or control the emissions of air contaminants that is not exempt from permit. In addition, each of the following at an agricultural source shall be considered a single agricultural permit unit:

(A) All confined animal facilities, except that portion that is conveyorized feed storage and distribution.

(B) All conveyorized feed storage and distribution at confined animal facilities.

(C) All orchard wind machines powered by an internal combustion engine with a manufacturer's rating greater than 50 brake horsepower, and operated more than 30 hours in a calendar year.

AGRICULTURAL SOURCE means a source of air pollution or a group of sources used in the production of crops, or the raising of fowl or animals located on contiguous property under common ownership or control that meets any of the following criteria:

(A) Is a confined animal facility.

(B) Is a stationary or portable internal combustion engine used in the production of crops or the raising of fowl or animals except an engine that is used to propel implements of husbandry, as that term is defined in Section 36000 of the Vehicle Code, as that section existed on January 1, 2003.

(C) Is a stationary source required by federal law to be included in an operating permit program established pursuant to Title V of the Federal Clean Air Act (42 U.S.C. Sec. 7661 to 7661f, incl.) and the federal regulation adopted pursuant to Title V, or is a source that is otherwise subject to regulation by a district pursuant to this division or the Federal Clean Air Act (42 U.S.C. Sec. 7401 et seq.)

AGRICULTURAL WASTES means 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.

AIR POLLUTION CONTROL OFFICER means the Executive Officer, or designee of the South Coast Air Quality Management District.

AIR CONTAMINANT or air pollutant means 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.

ATMOSPHERE (This definition was adopted on November 16, 1954 for the Metropolitan Zone and on November 23, 1973 for the Southern Zone. It is currently applicable only to the Metropolitan and Southern Zones.) "Atmosphere" means 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.

BASIC EQUIPMENT means any article, machine, equipment or contrivance which causes the issuance of air contaminants.

BREAKDOWN means a condition caused by an accidental fire or non-preventable mechanical or electrical failure.

CLEAN AIR SOLVENT is a VOC-containing material used to perform solvent cleaning, solvent finishing, or surface preparation operations or activities which:

(A) Contains no more than twenty-five (25) grams of VOC per liter of material, as applied;

(B) Has a VOC composite partial vapor pressure less than 5 mm Hg at 20°C (68°F);

(C) Reacts to form ozone at a rate not exceeding that of toluene;

(D) Contains no compounds classified as Hazardous Air Pollutants (HAPs) by the Federal Clean Air Act, or Ozone Depleting Compounds (ODCs) and Global Warming Compounds (GWCs) as defined by the District; and

(E) Has been certified by the District to meet the criteria stated in (A) through (D) according to test methods and procedures approved by the District.

CLEAN AIR SOLVENT CERTIFICATE is a certificate issued by the District to a manufacturer**,** distributor, or facility for a specified product or class of products that meets the criteria for a Clean Air Solvent.

A Clean Air Solvent Certificate shall be valid for five years from the date of issuance, unless some lesser time is designated and written notification is given by the Executive Officer, and shall be renewed upon the Executive Officer's determination that the product(s) continues to meet the criteria for a Clean Air Solvent. However, the Executive Officer may revoke such Certificate if it is determined that the specific product or class of products does not meet the requirements of Clean Air Solvents as defined at the time of issuance.

COMBUSTIBLE REFUSE means any solid or liquid combustible waste material containing carbon in a free or combined state.

COMBUSTION CONTAMINANTS are particulate matter discharged into the atmosphere from the burning of any kind of material containing carbon in a free or combined state.

COMPLIANCE SCHEDULE means 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.

CONFINED ANIMAL FACILITY (CAF) means a source or group of sources of air pollution at an agricultural source for the raising of 3,360 or more fowl or 50 or more animals, including but not limited to, any structure, building, installation, farm, corral, coop, feed storage area, milking parlor, or system for the collection, storage, or distribution of solid and liquid manure; if domesticated animals, including but not limited to, cattle, calves, horses, sheep, goats, swine, rabbits, chickens, turkeys, or ducks corralled, penned, or otherwise caused to remain in restricted areas for commercial agricultural purposes and feeding is by means other than grazing.

CONTROL EQUIPMENT means air pollution control equipment which eliminates, reduces or controls the issuance of air contaminants.

DISTRICT means the South Coast Air Quality Management District.

DUSTS are 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.

EXECUTIVE OFFICER means the Executive Officer or designee of the South Coast Air Quality Management District.

EQUIPMENT means any article, machine, or other contrivance.

EXEMPT Compounds are any of the following compounds

(A) Group I

1,1,1,2,3,4,4,5,5,5-decafluoropentane (HFC-43-10mee)

1,3-dichloro-1,1,2,2,3-pentafluoropropane (HCFC 225cb)

3,3-dichloro-1,1,1,2,2-pentafluoropropane (HCFC 225ca)

acetone

ethane

(A) Group I (cont.)

chlorodifluoromethane (HCFC-22)

trifluoromethane (HFC-23)

2,2-dichloro-1,1,1-trifluoroethane (HCFC-123)

2-chloro-1,1,1,2-tetrafluoroethane (HCFC-124)

pentafluoroethane (HFC-125)

1,1,2,2-tetrafluoroethane (HFC-134)

1,1,1,2-tetrafluoroethane (HFC-134a)

1,1-dichloro-1-fluoroethane (HCFC-141b)

1-chloro-1,1-difluoroethane (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.

difluoromethane (HFC-32)

1,1,1,2,2,3,3,4,4-nonafluoro-4-methoxy-butane ($C_4F_9OCH_3$)

2-(difluoromethoxymethyl)-1,1,1,2,3,3,3-heptafluoropropane [$(CF_3)_2CFCF_2OCH_3$]

1-ethoxy-1,1,2,2,3,3,4,4,4-nonafluorobutane ($C_4F_9OC_2H_5$)

2-(ethoxydifluoromethyl)-1,1,1,2,3,3,3-heptafluoropropane [$(CF_3)_2CFCF_2OC_2H_5$]

parachlorobenzotrifluoride (PCBTF)

methyl acetate

(B) Group II

methylene chloride (dichloromethane)

1,1,1-trichloroethane (methyl chloroform)

trichlorofluoromethane (CFC-11)

(B) Group II (cont.)

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 (VMS)

tetrachloroethylene (perchloroethylene)*

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)

1,2-dichloro-1,1,2-trifluoroethane (HCFC-123a)

1 chloro-1-fluoroethane (HCFC-151a)

*The listing of tetrachloroethylene (perchloroethylene) as a Group II Exempt Compound shall become effective December 2, 1997.

The use of Group II compounds and/or carbon tetrachloride may be restricted in the future because they are either 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 were phased out in accordance with the Code of Federal Regulation Title 40, Part 82 (December 10, 1993).

Whenever there is a conflict between the definition of exempt compounds of VOCs in this rule and the definition of exempt compounds of VOCs in another District rule, the definition in Rule 102 shall apply.

FLEET VEHICLES means gasoline-powered motor vehicles as defined by Section 415 of the Vehicle Code and which are operated from one business address.

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.

GASOLINE means any petroleum distillate having a Reid vapor pressure of 200 mm Hg (3.9 pounds per square inch), or greater.

HAZARDOUS AIR POLLUTANT means any air pollutant listed as such by the United States Environmental Protection Agency in accordance with Section 112(b)(1) of the Federal Clean Air Act (42 U.S.C. Sec. 7412(b)(1)).

HEARING BOARD means the Hearing Board of the South Coast Air Quality Management District.

INCREMENTS OF PROGRESS means 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.")

LOADING FACILITY means 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.

MOTOR VEHICLE is a vehicle which is self-propelled.

MULTIPLE-CHAMBER INCINERATOR means 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.

OIL-EFFLUENT WATER SEPARATOR means 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.

ORCHARD HEATER or citrus grove heater means any equipment burning any type of fuel or material capable of being used, for the purpose of giving protection from frost damage that is approved by the California Air Resources Board to produce no more than one gram of unconsumed solid carbonaceous material Equipment commonly known as Wind Machines are not included.

ORCHARD WIND MACHINE means an internal combustion engine powered fan used in orchards or in citrus groves exclusively for the purpose of giving protection from frost damage.

ORGANIC MATERIAL means a chemical compound of carbon excluding carbon monoxide, carbon dioxide, carbonic acid, metallic carbides, metallic carbonates and ammonium carbonate.

ORGANIC SOLVENTS include diluents and thinners and are defined as 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°C (219°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°C (219°F).

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)
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)

PARTICULATE MATTER means any material, except uncombined water, which exists in a finely divided form as a liquid or solid at standard conditions.

PPM means parts per million by volume.

PERSON means 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.

PHOTOCHEMICALLY REACTIVE SOLVENT means any solvent with an aggregate of more than 20 percent 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: 8 percent;

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

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.

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

PROCESS WEIGHT means 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.

PROCESS WEIGHT PER HOUR means 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.

RECEPTOR AREA means that specified geographic area in which the air contaminants emitted from a source area are present or to which they may be transported.

REDUCTION OF ANIMAL MATTER means any heated process, used for rendering, cooking, drying, dehydrating, digesting, evaporating and protein concentrating of animal matter.

REGULATION means one of the major subdivisions of the Rules of the South Coast Air Quality Management District.

RULE means a rule of the South Coast Air Quality Management District.

SCHEDULE OF INCREMENTS OF PROGRESS means 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.

SMALL BUSINESS means 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 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.

SOLID PARTICULATE MATTER means particulate matter which exists as a solid at standard conditions.

SOURCE AREA means that specified geographic area in which air contaminants are emitted.

STANDARD CONDITIONS are a gas temperature of 60°F and a gas pressure of 760 mm Hg (14.7 pounds per square inch) absolute.

SUBMERGED FILL PIPE means 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.

VEHICLE is 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.

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.

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

(Adopted January 9, 1976)

RULE 103. DEFINITION OF GEOGRAPHICAL AREAS

(a) LOS ANGELES AREA.
Beginning at the intersection of the southerly boundary of the Angeles National Forest with the easterly boundary in a general southwesterly direction to the contiguous jurisdictional limit of Los Angeles County in the Pacific Ocean;

- thence continuing along the boundary of the County of Los Angeles (in the Pacific Ocean);
- thence in a general northerly direction along the generally westerly boundary of the County of Los Angeles to the most northerly intersection of said westerly County line with the southern boundary of Hydrographic Unit 2 of the South Coastal area as defined by the California Water Resources Board;
- thence easterly along said southern boundary to its intersection with the westerly boundary of the Angeles National Forest;
- thence southerly along the said boundary of the Angeles National Forest to its intersection with the Los Angeles City limits;
- thence in a general easterly direction along the northerly boundary of said City of Los Angeles to the southwesterly corner of Section 16, T 2 N, R 13 W, S.B.B.&M;
- thence in a general easterly direction along said southerly boundary of the Angeles National Forest to said easterly boundary of the County of Los Angeles.

(b) UPPER SANTA CLARA RIVER VALLEY AREA.
Beginning at the intersection of the northern boundary of Los Angeles Area with the western boundary of Los Angeles County;
thence generally northerly along the western boundary of the County of Los Angeles to its intersection with the southern boundary of the Angeles National Forest;

- thence generally easterly along the southern boundary of the Angeles National Forest to its intersection with a line defining the drainage separation between the Santa Clara River Valley drainage area and the Antelope Valley drainage area;
- thence generally easterly along said drainage separation line to its intersection with the northerly boundary of the Angeles National Forest;
- thence generally southwesterly along the northern boundary of the Angeles National Forest to its intersection with the northern boundary of the Los Angeles Area;
- thence westward along said northern boundary of the Los Angeles Area to the said westerly boundary of the County of Los Angeles.

(c) ANTELOPE VALLEY AREA.
That portion of Los Angeles County northerly of the Angeles National Forest and the Upper Santa Clara River Valley Area.

(d) MOUNTAIN AREA OF LOS ANGELES COUNTY.
This area is composed of the two segments of the Angeles National Forest and adjoining areas of Los Angeles County not included in another Geographical Area.

(e) ISLAND AREA OF LOS ANGELES COUNTY.
This area is composed of Santa Catalina Island and San Clemente Island.

(f) SOUTHERN AREA.
That area included within the boundaries of the County of Orange.

(g) PALO VERDE AREA.

That portion of Riverside County which lies east of a line described as follows:

Beginning at the southwest corner of Section 32, T 8 S, R 20 E, S.B.B.&M., on the Riverside-Imperial County boundary;

Then northerly along section lines to the northwest corner of

Section 5, T 7 S, R 20 E;

Then westerly along the township line to the southwest corner of

Section 31, T 6 S, R 19 E;

Then northerly along the range line to the northwest corner of

Section 6, T 5 S, R 19 E;

Then easterly along the township line to the southwest corner of

Section 33, T 4 S, R 19 E;

Then northerly along section lines to the northwest corner of

Section 4, T 4 S, R 19 E;

Then westerly along the township line to the southwest corner of

Section 32, T 3 S, R 19 E;

Then northerly along section lines to the northwest corner of

Section 17, T 3 S, R 19 E;

Then westerly along the township line to the southwest corner of

Section 7, T 3 S, R 19 E;

Then northerly along section lines to the northwest corner of

Section 30, T 2 S, R 19 E;

Then westerly along the southerly line of

Section 24, T 2 S, R 18 E, to the southwest corner thereof;

Then northerly along section lines to the northwest corner of

Section 13, T 2 S, R 18 E;

Then westerly along section lines to the southwest corner of

Section 10, T 2 S, R 18 E;

Then northerly along section lines to the Riverside-San Bernardino County boundary.

(h) COACHELLA VALLEY AREA.
That portion of Riverside County included within the following described boundaries:

Beginning at the northwest corner of Section 6, T 2 S, R 3 E, S.B.B.&M., thence easterly along the northerly boundary of the County of Riverside to the northeast corner of Section 4, T 2 S, R 5 E;

Then southerly along section lines to the centerline of the

Colorado River Aqueduct;

Then southeasterly along the centerline of said Colorado River Aqueduct to the southerly line of

Section 36, T 3 S, R 7 E;

Then easterly along the township line to the northeast corner of

Section 6, T 4 S, R 9 E;

Then southerly along the easterly line of Section 6 to the southeast corner thereof;

Then easterly along section lines to the northeast corner of

Section 10, T 4 S, R 9 E;

Then southerly along section lines to the southeast corner of

Section 15, T 4 S, R 9 E;

Then easterly along section lines to the northeast corner of

Section 21, T 4 S, R 10 E;

Then southerly along the easterly line of Section 21 to the southeast corner thereof;

Then easterly along the northerly line of Section 27 to the northeast corner thereof;

Then southerly along section lines to the southeast corner of

Section 34, T 4 S, R 10 E;

Then easterly along the township line to the northeast corner of

Section 2, T 5 S, R 10 E;

Then southerly along the easterly line of Section 2, to the southeast corner thereof;

Then easterly along the northerly line of Section 12 to the northeast corner thereof;

Then southerly along the range line to the southwest corner of

Section 18, T 5 S, R 11 E;

Then easterly along section lines to the northeast corner of

Section 24, T 5 S, R 11 E;

Then southerly along the range line to the southeast corner of

Section 36, T 8 S, R 11 E;

Then westerly along the southerly boundary of the County of Riverside to the southwest corner of

Section 32, T 8 S, R 8 E;

Then northerly along section lines to the northwest corner of

Section 29, T 8 S, R 8 E;

Then westerly along section lines to the southwest corner of

Section 24, T 8 S, R 7 E;

Then northerly along section lines to the northwest corner of

Section 12, T 8 S, R 7 E;

Then westerly along section lines to the southwest corner of

Section 4, T 8 S, R 7 E;

Then northerly along section lines to the northwest corner of

Section 21, T 7 S, R 7 E;

Then westerly along section lines to the southwest corner of

Section 18, T 7 S, R 7 E;

Then northerly along the range line to the northwest corner of

Section 6, T 7 S, R 7 E;

Then westerly along the township line to the southwest corner of

Section 34, T 6 S, R 6 E;

Then northerly along section lines to the northwest corner of

Section 15, T 6 S, R 6 E;

Then westerly along section lines to the southwest corner of

Section 12, T 6 S, R 5 E;

Then northerly along section lines to the northwest corner of

Section 24, T 5 S, R 5 E;

Then westerly along section lines to the southwest corner of

Section 16, T 5 S, R 4 E;

Then northerly along section lines to the northwest corner of

Section 33, T 4 S, R 4 E;

Then westerly along section lines to the southwest corner of

Section 30, T 4 S, R 4 E;

Then northerly along the range line to the southeast corner of

Section 12, T 4 S, R 3 E;

Then westerly along section lines to the southwest corner of

Section 7, T 4 S, R 3 E;

Then northerly along the range line to the Point of Beginning.

(i) WESTERN RIVERSIDE COUNTY AREA.
That portion of Riverside County lying westerly of the Coachella Valley Area.

(j) JOSHUA TREE AREA.
That portion of Riverside County lying between the Coachella Valley Area and Palo Verde Area.

(k) SAN BERNARDINO AREA.
That portion of San Bernardino County lying southerly of the township line common to T 3 N and T 2 N and westerly of the range line common to R 3 E and R 2 E, S.B.B&M.

(l) DESERT AREA OF SAN BERNARDINO COUNTY.
That portion of San Bernardino County not included within the San Bernardino Area.

(m) REMOTE DESERT AREA.
That portion of San Bernardino and Riverside Counties which lies north and east of a line, beginning at the western boundary of San Bernardino County and running east along the line common to T 10 N and T 11 N of S.B.B.&M., to a line common to R 3 E and R 4 E; then south to a line common to T 3 N and T 2 N; then east to a line common to R ll E and R 12 E; then south to the southern boundary of Riverside County.

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

(Adopted January 9, 1976)

RULE 104. REPORTING OF SOURCE TEST DATA AND ANALYSES

Source tests to determine compliance with the provisions of these rules shall be conducted in accordance with the methods adopted by the District or any method determined by the Air Pollution Control Officer to be equivalent. Results of all tests and analyses shall be calculated to and reported at standard conditions.

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

(Adopted January 9, 1976)

RULE 105. AUTHORITY TO ARREST

The Air Pollution Control Officer and every officer and employee of the South Coast Air Quality Management District designated by him is authorized, during reasonable hours, to arrest a person without a warrant, whenever he has a reasonable cause to believe a person has committed a misdemeanor in his presence which is a violation of the Health and Safety Code or any provision of the Vehicle Code relating to the emission or control of air contaminants or any order, regulation, or rule adopted thereto. Authority to arrest is granted in accordance with Penal Code Section 836.5.

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

(Adopted January 9, 1976)

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 Pollution Control 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 days after each of the dates specified in the compliance schedule, certify to the Air Pollution Control Officer, in the form and manner specified by the Air Pollution Control Officer, 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 Air Pollution Control Officer, in the form and manner specified, that the increments of progress have or have not been achieved.

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

(Adopted March 2, 1990)(Amended April 6, 1990)

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,

    1106 - Marine Coating Operations,

    1107 - Coating of Metal Parts and Products,

    1115 - Motor Vehicle Assembly Line Coating Operations,

    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,

    1168 - Control of Volatile Organic Compound Emissions from Adhesive Application.

1. The provisions of an AECP shall be submitted by the District to the Air Resources Board (ARB) for submittal to the Environmental Protection Agency (EPA) 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 Section 110 (a)(3)(A) of the Clean Air Act.
2. 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 180 days from date of Plan submission in accordance with the schedule set forth in paragraph (e).
3. Each permit unit to be included in an AECP shall have been in operation pursuant to District permit or pursuant to Rule 219 prior to the submittal of the AECP application.

(c) Definitions

1. ALTERNATIVE EMISSION CONTROL PLAN (AECP) is a plan which allows a source to demonstrate an alternative method of rule compliance.
2. BASELINE EMISSIONS are the product of three factors expressed as lbs VOC/day (see (d)(7)). The factors are emissions rate, capacity utilization, and hours of operation.
3. EMISSION REDUCTIONS:

   (A) ENFORCEABLE means 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.

   (B) PERMANENT means 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.

   (C) QUANTIFIABLE means emissions must be able to be measured before and after the reduction using the same test method and averaging time.

   (D) SURPLUS means 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).

4. EQUIVALENCY PLAN is the same as an AECP.
5. MODIFICATION means 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:

   (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 means any article, machine, equipment, or other contrivance, or combination thereof, which may cause or control the issuance of air contaminants, and which:

   (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 refers to an Alternative Emission Control Plan.
8. REASONABLY AVAILABLE CONTROL TECHNOLOGY (RACT) is the lowest emission limit established through District regulations for a particular source.
9. STATE IMPLEMENTATION PLAN is the State (District) prepared plan, approved by the EPA, detailing how National Ambient Air Quality Standards will be achieved and maintained.
10. STATIONARY SOURCE is 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.
11. TRANSFER EFFICIENCY (TE) is 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.

12. VOLATILE ORGANIC COMPOUND (VOC) is any volatile compound of carbon, excluding methane, carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates, ammonium carbonate, 1,1,1 trichloroethane, methylene chloride, trifluoromethane (FC-23), trichlorotrifluoroethane (CFC-113), dichlorodifluoromethane (CFC-12), trichlorofluoromethane (CFC-11), chlorodifluoromethane (HCFC-22), dichlorotetrafluoroethane (CFC-114), chloropentafluoroethane (CFC-115), dichlorotrifluoroethane (HCFC-123), tetrafluoroethane (HFC- 134a), dichlorofluoroethane (HCFC-141b), and chlorodifluoroethane (HCFC-142b).

(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 24-hour daily emissions basis; and

   (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 Executive Officer 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.

1. Existing permits shall be surrendered and new permits incorporating the provisions of the AECP shall be obtained. Notwithstanding provisions of 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.
2. 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).
3. 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 emission reduction will be obtained; and

   (E) an explanation of how the proposed 20 percent emission reduction will be enforceable, permanent, quantifiable, and surplus; and

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

4. 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 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.
5. The Plan shall result in at least a twenty (20) percent reduction in VOC baseline emissions, thus producing a net air quality benefit and establishing an AECP emissions limit.
6. 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 Executive Officer not to exceed 24 hours. Sources lacking specific hours of operation records may substitute daily records (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 years directly preceding the source's application for a Plan, unless another two-year period can be shown to the satisfaction of the Executive Officer and EPA to more accurately represent the source's normal allowable operations. No credit will be given for down-time.

7. Emission reductions shall consist of VOC emissions only and shall be enforceable, permanent, quantifiable, and surplus.
8. 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.
9. Emission reductions shall consist of emissions resulting from activities governed by only one source- specific District rule for which the Plan is submitted.
10. Equipment subject to the Plan shall be located within the same stationary source.
11. 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.
12. 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 120 days of rule adoption. The District will move to approve or deny such Plans within 180 days of submittal; or

   (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 180 days of rule adoption. The District will move to approve or deny such Plans within 180 days of submittal.

1. 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 60 days following the date the specific rule relating to the Plan is amended if the rule amendment is pertinent to the Plan; or

(C) not less than 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.

(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 the Clean Air Act Section 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.
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.
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).

(Adopted May 5, 1989)(Amended March 6, 1992)
(Amended August 18, 2000)(Amended May 2, 2003)

RULE 109. RECORDKEEPING FOR VOLATILE ORGANIC COMPOUND EMISSIONS

(a) Applicability

(1) 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.

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

219 - Equipment not Requiring a Written Permit Pursuant to Regulation II,
1102 - Petroleum Solvent Dry Cleaners,
1104 - Wood Flat Stock Coating Operations,
1106 - Marine Coating Operations,
1106.1 - Pleasure Craft Coating Operations,
1107 - Coating of Metal Parts and Products,
1115 - Motor Vehicle Assembly Line Coating Operations,
1122 - Solvent Degreasers,
1124 - Aerospace Assembly and Component Manufacturing Operations,
1125 - Metal Container, Closure, and Coil Coating Operations,
1126 - Magnet Wire 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,
1151 - Motor Vehicle and Mobile Equipment Non-Assembly Line Coating Operations,
1164 - Semiconductor Manufacturing,

1168 - Adhesive Applications,
1171 - Solvent Cleaning Operations.

(b) Definitions

(1) EXEMPT COMPOUND is as defined in Rule 102.

(2) GRAPHIC ARTS MATERIAL is any ink, coating, adhesive, fountain solution, thinner, retarder, or cleaning solution used in printing or related coating or laminating processes.

(3) MATERIAL CATEGORY is a type of VOC-containing material including but not limited to coatings, resins, adhesives, sealants, inks, fountain solutions, solvents, strippers, thinners, diluents, catalysts, activators, retarders, accelerators, mold releases, mold seals, dyes and lubricants.

(4) PERMIT UNIT is 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 Rules 201 and/or 203, or

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

(5) STATIONARY SOURCE is 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.

(6) SUPER COMPLIANT MATERIAL is any material containing 50 grams or less of VOC per liter of material.

(7) VOLATILE ORGANIC COMPOUND (VOC) is as defined in Rule 102.

(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 unless a longer time

period is specified in an applicable rule or permit. 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 (use of amounts of one pint per week or less may be recorded in an alternative manner);

(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 (use of amounts of one pint per week or less may be recorded in an alternative manner);

(G) where applicable, the vapor pressure of solvents used as surface cleaners; and

(H) oven temperature (for coating operations).

(d) Monthly Recordkeeping Option

(1) In lieu of complying with the requirements of subdivision (c), an owner or operator of a stationary source may choose to comply with the monthly recordkeeping requirements of this subdivision provided that the stationary source:

(A) is not subject to a daily emission or usage limit in any applicable District rule(s) or permit(s); and

(B) uses only materials that comply with the VOC content requirements of the applicable District rule(s).

(2) An owner or operator of a stationary source choosing to keep monthly records shall develop and maintain a VOC Listing of all the VOC-containing materials purchased for use at the facility. The list shall be

kept in a format specified by the District or in an equivalent format and shall contain the following data:

(A) the name and AQMD facility identification number of the stationary source;

(B) for each VOC-containing material:

(i) the manufacturer, a manufacturer product number, ID, or code that uniquely identifies the material, and a material category;

(ii) the VOC content of each material, as applied, less water and exempt compounds;

(iii) the material VOC content of each material, as applied, including water and exempt compounds;

(iv) the specific mixing ratio for the material, hardeners, catalysts, solvents, diluents, and thinners, if applicable; and

(v) the type of activity or substrate to which the materials are applied.

The VOC Listing shall be updated within seven (7) calendar days from the date of receipt of a new material at the facility.

(3) An owner or operator of a stationary source shall record the following information on a Usage Log in a format specified by the District or in an equivalent format:

(A) the name and AQMD identification number of the facility;

(B) the manufacturer product number, ID, or code from the VOC Listing;

(C) the AQMD permit number(s) of the permit unit(s) in which the material was used;

(D) the amount of each material used on an on-going basis which:

(i) may be aggregated for all permit unit(s) that are subject to a single facility-wide material usage or VOC emission limits and do not have unit specific limits; and

(ii) may be aggregated for multiple days up to a maximum of three (3) days without any calendar monthly overlap;

(E) the initials of the person entering the data; and

(F) the date the data was entered.

(4) On a calendar monthly basis, an owner or operator of a stationary source shall record the following information, on a Monthly Summary form, in a format specified by the District or in an equivalent format:

(A) the name, address, and AQMD identification number of the facility;

(B) the AQMD permit number(s) of the permit unit(s) in which the materials were used;

(C) the name and telephone number of the contact person;

(D) for each material used, the manufacturer product number, ID, or code from the VOC Listing;

(E) the amount of each material used from the records in the Usage Log;

(F) from the VOC listing, the material VOC content as applied for each material from the VOC listing, and, for lithographic printing inks, the emission factor for each ink based on the appropriate retention factor;

(G) the VOC emissions from each material; and

(H) the month and year for which the data were entered.

(5) An owner or operator of a facility with equipment not requiring a written permit pursuant to Rule 219 or a permit unit using only Super Compliant Materials may choose to keep monthly records provided the equipment meets the requirements of paragraph (d)(1). In such cases, the owner or operator of the equipment shall record:

(A) the applicable data for the VOC Listing in paragraph (d)(2); and

(B) the applicable data for the Monthly Summary in paragraph (d)(4)

(e) Supporting Documentation

An owner or operator of a stationary source choosing to keep monthly records pursuant to subdivision (d) shall maintain and make available to a District representative upon request all of the information necessary to verify the amount of material used at the facility including, but not limited to:

(1) purchase records identifying the supplier's name, date, and amount of material purchased; and

(2) waste manifests identifying the waste material, source's name and address, name and address of company removing waste, and the amount of waste materials disposed.

(f) Alternative Recordkeeping System

(1) In lieu of complying with subdivision (d), an owner or operator of a stationary source subject to this rule may comply by means of an Alternative Recordkeeping System, provided a plan for such a system is prepared by the operator, submitted to the District for approval, and approved in writing by the District, the California Air Resources Board (CARB), and the United States Environmental Protection Agency (EPA). The plan shall include, at a minimum:

(A) A list of applicable District rules, permit unit(s), and permit conditions to be included in the Alternative Recordkeeping System;

(B) A description of the quantification and recordkeeping procedures for material VOC and solid content as applied if required in the applicable rules or permits, material usage, emission factors (if applicable), and VOC emissions as applied; and

(C) An identification of all supporting documents to verify the information provided in subparagraph (f)(1)(B);

(2) An Alternative Recordkeeping System may be approved by the District, if:

(A) the system provides a deterrent to non-compliance, and is enforceable; and

(B) compliance can be verified within a reasonable time period as determined by the District.

(g) 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 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, 7/1/85 edition). Analysis done according to EPA Method 24 shall utilize Procedure B of ASTM Method D-2369, referenced within EPA Method 24. The exempt solvent content shall be determined using SCAQMD Test Methods 302, 303, and 304 (SCAQMD "Laboratory Methods of Analysis for Enforcement Samples" manual). Alternatively, the VOC content may be determined using SCAQMD Test Methods 302,

and 303. 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 EPA 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 Rules 1136 and 1168.

(4) VOC content for non-thin film ultraviolet/electron beam or other radiation-cured materials shall be determined using ASTM Method D-5403, Test Method for Volatile Content of Radiation Curable Materials using a film thickness not less than 0.3 mil and not greater than 1.0 mil. This method is not applicable to thin-film radiation cured materials. The VOC content of thin-film radiation cured materials shall be determined using the test methods specified in paragraph (g)(1) or by any other method approved by the District, CARB, and EPA.

(5) The VOC content for multi-package coatings shall be determined using the test methods specified in paragraph (g)(1).

(6) The VOC content determination for super compliant water-based coatings shall be determined using the non-volatile determination portion of SCAQMD Method 304-91 (Distillation of Solvents from Paints, Coatings, and Inks) followed by analysis of the distillate according to the SCAQMD Clean Air Solvent Certification Protocol.

(7) Alternative test methods may be used if they are determined to produce results adequate to determine compliance and are approved in writing by the District, CARB, and EPA.

(8) 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. This does not apply to rotogravure publication inks, powder coatings, and non thin-film ultraviolet/electron beam or other radiation-cured materials where the specific test methods for these materials as listed in subdivision (g) shall be used exclusively.

Exempt compounds that are not specifically listed in the "Applicability" section of SCAQMD Test Methods 302 and 303 will be analyzed as exempt compounds only at such time as manufacturers specify which individual compounds are used in the formulation. In addition, the manufacturers must identify the EPA, CARB, and the District approved test methods used to quantify the amount of each exempt compound.

(h) Exemptions

(1) The provisions of this rule shall not apply to any cleaning solvents subject to Rule 1171 or Rule 1122 provided that the material contains 50 grams of VOC per liter of material or less.

(2) The provisions of this rule shall not apply to any Super Compliant Material(s) used at a facility which can demonstrate that the total permitted and non-permitted facility VOC emissions, including emissions from the super compliant material, do not exceed 4 tons in any calendar year as shown by annual VOC records.

(3) If the District determines that an owner or operator has violated any provision of this rule, monthly records shall be kept pursuant to subdivision (d) for all materials exempt under paragraphs (h)(1) and (h)(2) for three (3) consecutive years following discovery of the violation.

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

(Adopted January 5, 1990)

RULE 201.1. PERMIT CONDITIONS IN FEDERALLY ISSUED PERMITS TO CONSTRUCT

A person constructing and/or operating equipment pursuant to a permit to construct issued by the federal Environmental Protection Agency shall construct the equipment in accordance with the conditions set forth in that permit, and shall operate the equipment at all times in accordance with such conditions.

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

(Adopted January 9, 1976)(Amended January 5, 1990)

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 Executive 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 cancel~~l~~ed.

(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 January 9, 1976)(Amended January 5, 1990)

RULE 203. PERMIT TO OPERATE

(a) 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 Executive Officer or except as provided in Rule 202.

(b) The equipment shall not be operated contrary to the conditions specified in the permit to operate.

(Adopted January 9, 1976) (Amended January 4, 1985)
(Amended March 6, 1992) (Amended October 8, 1993)

RULE 204. PERMIT CONDITIONS

To assure compliance with all applicable regulations, the Executive Officer may impose written conditions on any permit. The Executive 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.

(Adopted January 9, 1976)(Amended January 5, 1990)

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 Executive Officer.

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

(Adopted February 6, 1976)(Amended January 5, 1990)

(Amended October 8, 1993)

RULE 206. POSTING OF PERMIT TO OPERATE

(a) A person granted a permit under Rule 202 or 203 shall not operate or use any equipment unless the entire permit to operate or a legible facsimile of the entire permit is affixed upon the equipment in such manner that the permit number, equipment description, and the specified operating conditions are clearly visible and accessible. In the event that the equipment is so constructed or operated that the permit to operate or a legible facsimile cannot be so placed, the entire permit to operate or the legible facsimile of the entire permit shall be mounted so as to be clearly visible in an accessible place within 8 meters (26 feet) of the equipment, or as otherwise approved in writing by the Executive Officer.

(b) Notwithstanding subdivision (a), a facility permit shall be kept at the location for which it is issued, and be made available to authorized District personnel, upon request.

(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.

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

RULE 208 -- PERMIT AND BURN AUTHORIZATION FOR OPEN BURNING
(Adopted October 8, 1976) (Amended January 5, 1990) (Amended December 21, 2001)

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:

(1) written permit for such fire by the local fire protection agency or the Executive Officer; and

(2) burn authorization from the Executive Officer for each day of burning.

(Adopted January 9, 1976)(Amended November 1, 1985)

(Amended January 5, 1990)

RULE 209. TRANSFER AND VOIDING OF PERMITS

A permit shall not be transferable, whether by operation of law or otherwise, either from one location to another, from one piece of equipment to another, or from one person to another.

When equipment which has been granted a permit is altered, changes location, or no longer will be operated by the permittee, the permit shall become void. For the purposes of this rule, mergers, name changes, or incorporations by an individual owner or partnership composed of individuals shall not constitute a transfer.

2-28-94

(Adopted January 9, 1976)(Amended January 5, 1990)
(Amended October 8, 1993)

RULE 210. APPLICATIONS

(a) Every application for a permit required under Rules 201, 203, and 208 shall be filed in a manner and form prescribed by the Executive Officer, and shall give all the information necessary to enable the Executive Officer to make the determination required by Rule 212 and any other standard applicable to the granting of permits.

(b) The Executive Officer shall notify the applicant in writing within 30 calendar days of the receipt of an application for a permit, pursuant to Rule 201, as to whether or not the application contains sufficient information to be deemed complete. Upon receipt of any resubmittal or additional information a new 30-day period shall begin during which the Executive Officer shall determine and notify the applicant regarding completeness of the application. If the Executive Officer determines that the application is not complete, the applicant may appeal that determination to the District Governing Board. The District Governing Board shall make its written determination within 60 calendar days after receiving the applicant's appeal.

(c) An application for a permit to construct shall be denied 120 calendar days after the date of filing if the applicant has not submitted sufficient information to enable the Executive Officer to deem it complete, unless the Executive Officer has, in writing, extended the time. The permit application shall not be denied during the pendency of an appeal to the Governing Board pursuant to subsection (b).

(d) The Executive Officer shall act to grant or deny a permit to construct within the following time limits:

(1) Within 180 days after the application has been deemed complete; or

(2) If the district is a responsible agency under the California Environmental Quality Act, within 180 days after a negative declaration or environmental impact report has been certified by the lead agency (whichever time, (d)(1) or (d)(2), is longer); or

(3) If the district is a lead agency under the California Environmental Quality Act, within one year after the application has been deemed complete.

(4) Significant and minor permit revisions for Title V facilities shall follow the timetables for permit action as specified in Rules 3003 and 3005.

Such time limits may be extended for one 90-day period upon the written consent of the Executive Officer and the applicant, except that projects subject to Health and Safety Code Section 42314.2 may receive additional extensions as authorized by that section.

(e) The Executive Officer shall notify the applicant in writing of the approval or denial of the permit.

(Adopted January 9, 1976)(Amended July 6, 1984)(Amended May 17, 1985)
(Amended May 1, 1987)(Amended July 10, 1987)(Amended March 3, 1989)
(Amended June 28, 1990)(Amended September 6, 1991)
(Amended August 12, 1994)(Amended December 7, 1995)

Rule 212. Standards For Approving Permits

(a) The Executive Officer or designee shall deny a Permit to Construct or a Permit to Operate, except as provided in 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 Section 41700, 41701, or 44300 (et sec.) of the State Health and Safety Code or of these rules.

(b) If the Executive Officer 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 Executive Officer's or designee's intent to grant a Permit to Construct at least 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 Executive Officer 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 Executive Officer 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 x 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 listed in Table I of Rule 1401, or any other material determined by the Executive Officer or designee to be potentially toxic. This paragraph shall not apply if the Executive Officer 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 Executive Officer 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 Executive Officer 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 Executive Officer 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 Executive Officer or designee. The notice shall be mailed at the time that the Executive Officer or designee notifies the permit applicant of the decision or actions The 10-day period to appeal, specified in 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 Executive Officer 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 Executive Officer 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 XX, RECLAIM facilities, or Outer Continental Shelf (OCS) Facilities located within 25 miles of the State's seaward boundary and for which the District has been designated as the corresponding onshore area (COA), 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
Sulfiir Dioxide	60
Carbon Monoxide	220
Lead	3

The process for public notification and comment shall include all of the applicable provisions of 40 Code of Federal Regulations (CFR) Part 51, Section 51.161(b), and 40 CFR Part 124, Section 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 U. S. EPA through Region 9, the 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 30-day period for submittal of public comments.

(Adopted January 9, 1976)(Amended January 5, 1990)

RULE 217.PROVISION FOR SAMPLING AND TESTING FACILITIES

The Executive 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 Executive 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.

RULE 218.1. CONTINUOUS EMISSION MONITORING PERFORMANCE SPECIFICATIONS

(a) Definitions

(1) ANALYZER - the part of the continuous emission monitoring system (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, carbon dioxide or other diluent gas concentrations as 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 sub-system 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:

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

Where:

FSR = Full span range

$|CC|$ = Absolute value of the 95% confidence coefficient

$|\bar{d}|$ = 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 (c), "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:

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

Where:

C = Calibration gas concentration

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$|CC|$ = Absolute value of the 95% confidence coefficient

$|\bar{d}|$ = 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 pairs

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 (b), "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

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received written approval and conditions thereto applying, from the Executive Officer.

(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 major subsystems: sampling interface, analyzer and data acquisition system.

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(11) CONTINUOUS MONITORING - a monitoring in which a minimum of one 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 - 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 Executive Officer 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.

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(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) 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.

(19) 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.

(20) 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.

(21) 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.

(22) 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 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:

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

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Where:

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

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

(23) 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 relative accuracy requirement shall apply to the corrected concentration value. The RA of a RATA data set is calculated and expressed as a percentage as follows:

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

Where:

$|\bar{d}|$ = Absolute value of the mean difference

$|CC|$ = Absolute value of the 95% confidence coefficient

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

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

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

Where:

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

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

n = Number of data points

(24) 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

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certified gas mixture into the CEMS upstream of the sampling interface and as close to the probe inlet as practicable.

(25) 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 Executive Officer. Repairs to a malfunctioning system are excluded from this definition.

(26) 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.

(27) 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 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.

(28) 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.

(29) SYSTEM FAILURE - inability of the CEMS to meet the requirements of Rule 218.1.

(30) TIME-SHARING - a monitoring technique where an analyzer and possibly the associated sample conditioning system is used on more than one source.

(31) 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.

(32) ZERO DRIFT (ZD) is 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

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response values and the absolute value of the CC, to the full span range, calculated as a percentage as follows:

$$ZD = \frac{|\bar{d}| + |CC|}{S} \times 100$$

Where:

S	=	Full span range
$\|CC\|$	=	Absolute value of the confidence coefficient
$\|\bar{d}\|$	=	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 pairs
d_i	=	The difference between a pair of instrument response values

(33) 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.

(b) Standards for New or Modified CEMS

In order to be a Certified CEMS, a CEMS subject to the provisions of Rule 218 Sections (c)(1), (d)(1)(C), (d)(1)(D)(i), (d)(2)(C) and (d)(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

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The monitoring system sampling probe tip and the reference method sampling port locations shall be determined according to District 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 Executive Officer. If an alternate location is chosen which does not conform with District Method 1.1, the absence of flow disturbance shall be demonstrated using the District 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 District 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(b)(3)(C)(ii).

(C) Full Span Range (FSR)

(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 Executive Officer that the FSR will not be exceeded. Such demonstrations may include, but not limited to, historical emissions data, historical process information, and historical operational information. A written approval from the Executive Officer 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 (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

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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 oxygen and carbon dioxide 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 Executive Officer.

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

(I) 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,

(II) 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,

(III) 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:

(a) Report data at 10.0 percent FSR value, or,

(b) 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(f).

(D) Strip Chart Recorder

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(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% of the span, and a minimum of 100 chart divisions.

(ii) For CEMS where the strip chart recorder is used as a back-up 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 (e).

(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

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(c)(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

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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(b)(2)(B)(i). The 2-hour CE test shall be performed once every two hours as close to 2-hour intervals as practicable, with total of thirteen consecutive tests performed. The 2-hr 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 (b)(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(b)(2)(B)(i) to provide environmental controls for the analyzer enclosure by demonstrating, to the satisfaction of the Executive Officer, that the CEMS is located:

(I) In a geographic area where seasonal high and low temperatures do not exceed the operational temperature specifications for the analyzer,

(II) In a geographic area where monthly maximum temperature variation is less than 30°F for all months of the year, and

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(III) 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 sets of test data generated. If the number of tests exceeds nine sets, data may be discarded if it is identified as an outliers by the technical guidance set forth by the Executive Officer, or for valid reasons (e.g., process upsets, CEMS malfunction, etc.) which must be substantiated with appropriate documentation and subject to approval by the Executive Officer. All data collected shall be submitted to the Executive Officer.

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
NOx	1.0 ppm
SO_2	2.0 ppm
CO	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 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 2 feet per second stack gas velocity for cases where the mean stack gas

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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 (b)(4)(C):

(A) Response Time

The response time for CO CEMS shall not exceed 1.5 minutes except where there is a technical limitation, in which case the response time shall be 5 minutes. The response time for all other CEMS and flow monitors, as applicable, shall not exceed 5 minutes.

(B) Calibration Error

The CE testing requirements are specified in Section (b)(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 District Source Testing Manual. The number of tests shall be determined as follows:

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

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

(III) Test(s) shall be conducted at three different load levels if the equipment operates outside of the criteria in Sections (b)(1)(C)(i)(I) and (II).

The absence of stratification is considered verified if the difference between the highest measured concentration (time normalized) and

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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 of the following alternatives:

(I) 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:

(a) 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

(b) 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).

(II) Determine a representative CEMS probe location such that the following criteria are met:

(a) all traverse point concentrations are within 10.0% of the average of all traverse point concentrations (time

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normalized), or, the difference is less than or equal to 1.0 ppm, whichever is greater, and

(b) there exists at least one traverse point concentration (Xr), not located next to the stack or duct wall, that is less than or equal to 10.0% each adjacent traverse point concentration of Xr, or the difference is less than or equal to 1.0 ppm, whichever is greater, and,

(c) the CEMS probe is located at (or as near as practical) Xr with minimum adjacent traverse point concentration fluctuations as determined in section (ii)(II)(b), above.

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

(IV) 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 District method in the Source Test Manual, Chapter X: Non-Standard Methods and Techniques following the testing conditions of Section (3)(C)(i)(I), (II) or (III), 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 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

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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 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 (b)(2)(A)(i) and (ii), but less than or equal to 5.0 percent of the full span range 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 relative accuracy audit required under Rule 218 Section (b)(4)(C). The CEMS system bias shall not exceed $\pm$ 5.0 percent of the full span range 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 relative accuracy tests after CEMS certification, the owner or operator may request a waiver from stratification, cyclonic flow, and/or interference requirements in Sections (b)(3)(C), (D) and (E), respectively, by submitting to the Executive

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Officer, 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 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 Executive Officer 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 Executive Officer. Alternatively, with Executive Officer 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.

(c) Standards for Existing CEMS

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

(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

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(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 ~~Monitors~~ 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 Executive Officer. Oxygen and carbon dioxide 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 cycle of operation (sampling, analyzing and data recording), for each successive 15 minute period.

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

(1) Calibration Gas

(A) Calibration gas mixtures, as defined in Rule218.1 (a)(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.

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(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 recertificaton 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 Executive Officer.

(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 Executive Officer.

(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 Executive Officer.

(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 Executive Officer, 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

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contaminant analyzed by the subject monitor or 1.0 percent of the applicable standard, whichever is less.

(B) For carbon monoxide monitors, the zero gas shall be certified by the manufacturer to contain less than 0.5 ppm carbon monoxide or 1.0 percent of the applicable standard, whichever is less.

(C) For carbon dioxide and oxygen monitors, the zero gas shall be certified by the manufacturer to contain less than 1.0 ppm carbon dioxide or oxygen.

(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 Executive Officer, 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 Executive Officer approval.

(5) NO_2 to NO Conversion Efficiency

The conversion efficiency tests shall be conducted according to the requirements of District 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.

(e) Time-Sharing Requirements

A time-shared CEMS for which an application is submitted after [date of adoption] 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.

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(2) Each source shall have a data-reading period, at a minimum, equal to three 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 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.

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Table 1
REFERENCE METHODS
RULE 218.1

District Method 1.1 - Sample and Velocity Traverses for Stationary Sources

District Method 1.2 - Sample and Velocity Traverses for Stationary Sources with Small Stack or Ducts

District Method 2.1 - Determination of Stack Gas Velocity and Volumetric Flow Rate (S-type Pitot tube)

District Method 2.2 - Direct Measurement of Gas Volume through Pipes and Small Ducts

District Method 2.3 - Determination of Gas Velocity and Volumetric Flow Rate from Small Stacks or Ducts

District Method 3.1 - Gas Analysis for Dry Molecular Weight and Excess Air

District Method 4.1 - Determination of Moisture Content in Stack Gases

District Method 6.1 - Determination of Sulfuric Acid and Sulfur Oxides from Stationary Sources

District Method 7.1 - Determination of Nitrogen Oxide Emissions for Stationary Sources

District Method 100.1 - Instrumental Analyzer Procedures for Continuous Gaseous Emission Sampling

District 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 or D 2622-82 - Determination of Sulfur in Liquid Fuels

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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. <u>Low Level Calibration Error</u>
   The low level calibration error test is defined as challenging the CEMS (from probe to monitor) with certified calibration gases (e.g., NO in N2) at three levels

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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 calibration error 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 calibration error 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 calibration error standards through the CEMS calibration system.

   iv. Read the CEMS response to the calibration gas starting no later than three system response times after introducing the calibration gas; the CEMS response shall be averaged for at least three response times and for no longer than six response times.

   v. After the low level calibration error check allow the CEMS to sample stack gas for at least 15 minutes.

   vi. Repeat steps iii through v until all three low level calibration error 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 NO2 is representative of the ratio of NO and NO2 in stack gas) and an appropriate non-reactive, non-condensable and non-soluble tracer gas from a single cylinder (EPA Protocol as specified in Rule 218.1 or NIST traceable to 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

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matrix (water, CO2, 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 Executive Officer 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 requirements

      ii. Monitor the CO (or alternative tracer gas) using an appropriate continuous (or semi-continuous if necessary) monitor meeting the requirements of 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 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.

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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 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 $\leq$ 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 Executive Officer staff as well as the CEMS operator.

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 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 Method 100.1 and all data falling within the 10-95 percent full scale span, and preferably within 30-70 percent full scale span.

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iii. Alternate spiked sample gas and unspiked sample gas for a total of nine 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 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 as specified in Rule 218.1. If the average difference is less than the confidence coefficient then no low level bias factor is applied. If the average difference is greater than the confidence coefficient 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 confidence coefficient 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. <u>Low Level RATA/Bias Factor Determination using Enhanced Reference Method 6.1</u>

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 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.

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b. Testing Procedures
The reference method for the low level RATA/bias factor determination is Method 100.1

i. Perform a minimum of nine 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 Method 100.1 performance criteria.

iv. Calculate the average difference (d = CEMS - reference method, ppm) and confidence coefficient (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 months of the end of the calendar quarter in which the CEMS was originally certified.

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(Adopted January 9, 1976)(Amended April 1, 1977)(Amended August 5, 1977)
(Amended April 6, 1979)(Amended August 7, 1981)(Amended May 14, 1999)

RULE 218. CONTINUOUS EMISSION MONITORING

(a) Definitions

(1) ANALYZER- the part of the continuous emission monitoring system (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 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 sub-system 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 record 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; that has met the applicable performance specifications according to Rule 218(c)(1)(B), and, has

received written approval and conditions thereto applying, from the Executive Officer.

(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 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 major subsystems: sampling interface, analyzer and data acquisition system.

(7) CONTINUOUS MONITORING - monitoring in which a minimum of one 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 District that grants test-method-specific approvals to independent testing laboratories or firms that perform tests to determine source compliance with District 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 Executive Officer 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

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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 Executive Officer. 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 measurement (e.g. concentration, mass emission, flow rate) is taken and recorded every fifteen (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 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.

(17) SYSTEM FAILURE - inability of the CEMS to meet the requirements of Rule 218.1, "Continuous 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".

(18) TIME-SHARING - a monitoring technique where an analyzer and possibly the associated sample conditioning system is used on more than one source.

(19) WORKING DAY - Monday through Friday excluding holidays.

(20) 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.

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(21) 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.

(b) Applicability and Monitoring Requirements for New, Modified and Existing CEMS

(1) 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:

(A) This Rule shall not apply to CEMS subject to Regulation XX - "Regional Clean Air Incentives Market (RECLAIM)", Regulation IX - "New Source Performance Standards (NSPS)", Regulation X - National Emission Standards for Hazardous Air Pollutants (NESHAPS), or Regulation XXXI - "Acid Rain Program".

(B) 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.

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

(2) 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 calculat air contaminant emission rates or concentrations, as specified in Rule 218, Sections (e) and (f).

(c) 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 Executive Officer an "Application for CEMS" or "Application for CEMS Modification", as applicable. Any application submitted on or after May 14, 1999, shall require an initial approval by the Executive Officer prior to installation of a new CEMS or modification of an existing CEMS. The Executive Officer shall notify the applicant in writing within 60 calendar days of receipt of an application for a new CEMS, or within 30

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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 Executive Officer 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 Executive Officer 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 (c)(1)(B). The owner or operator shall notify the Executive Officer 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 District Laboratory Approval Program. Data from such tests shall be submitted to the Executive Officer 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 (c)(1)(B). After final approval, modifications made to the CEMS shall be reviewed and approved by the Executive Officer according to the specifications stipulated in Rule 218, Section (c)(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 (c)(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 (b), and the subsequent operation and maintenance of the certified CEMS shall be in

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accordance with the provisions of Rule 218, Sections (b), (e), (f) and (g) and of the requirements of Rule 218.1(b) and (d), 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" (40CFR60), 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 (b), (e), (f) and (g), and the requirements of 40CFR60, Appendix F - "Quality Assurance Procedures" (Appendix F).

Notwithstanding the requirements of Section (c)(1)(B)(ii), any alternative test methods for 40CFR60, 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 Executive Officer.

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

(A) In-lieu of submitting an application for CEMS per Rule 218, Section (c)(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 limits(s) for which the CEMS is required is 24 hours or greater; or, if the owner or operator demonstrates, to the satisfaction of the Executive Officer, that no CEMS technology is commercially available for the applicable contaminant and the applicable limits.

(B) If the conditions in Rule 218, Section (c)(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 Executive Officer;

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(ii) The SCEMS shall be capable to take and record a minimum of one 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 exeedance of the allowable limit or standard is calculated using fewer than 100% 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 exeedance;

(v) If a time shared SCEMS is proposed, it shall meet the performance specifications of Rule 218.1, Section (e);

(C) The requirements for the application submittal and approval of CEMS as provided in Rule 218, Section (c)(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) Quality Assurance/Quality Control 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 (c)(1)(B)(i), shall submit to the Executive Officer 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 (c)(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 Executive Officer.

(d) Requirements for Existing CEMS and SCEMS

(1) Requirements for Existing CEMS

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(A) A CEMS installed and granted final approval before May 14, 1999 shall be maintained and operated according to the provisions of Rule 218, Sections (b), (e), (f) and (g), and the requirements of Rule 218.1, Sections (c) and (d).

(B) A CEMS application for initial and final approval submitted to the Executive Officer before May 14, 1999 shall be reviewed and approved by the Executive Officer according to the specifications and requirements of Rule 218.1, Sections (c) and (d). After final approval, the CEMS shall be operated and maintained according to the provisions of Rule 218, Sections (b), (e), (f) and (g), and the requirements of Rule 218.1, Sections (c) and (d).

(C) Modifications requiring recertification to any existing CEMS shall be reviewed and approved according to the conditions under Rule 218 Section (c)(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 (c)(1)(B)(i) or (ii), as applicable.

(D) (i) All existing CEMS as prescribed in Rule 218, Sections (d)(1)(A) and (B) shall comply with the provisions of Rule 218.1, Sections (b) and (d), or 40CFR60 Appendices B and F, as applicable, and of Rule 218, Sections (b) and (c), no later than May 14, 2006.

(ii) The requirements of Rule 218, Section (d)(1)(D)(i) shall be waived for a period of three years if the owner or operator demonstrates, to the satisfaction of the Executive Officer, that the existing CEMS is providing data that are of a quality commensurate with the original performance specifications and other indicators of consistent data quality. Data quality factors that will be considered include:

(I) Relative Accuracy
(II) Calibration Error
(III) Calibration Drift
(IV) Zero Drift
(V) Valid data return percentage
(VI) Availability or up-time percentage
(VII) Breakdown frequency and duration
(VIII) Excursions beyond quality control limits in QA plan.

The owner or operator may apply for a waiver under this sub-section every three years after May 14, 2006. This sub-section

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shall not apply to existing CEMS that are required to comply with the provisions of Rule 218.1, Sections (b) and (d), or, 40 CFR60, Appendices B and F, as applicable, and Rule 218, Sections (b) and (c), as a result of CEMS modifications requiring recertification, rule implementation, or, compliance with a permit condition.

(E) The owner or operator of existing CEMS shall develop and implement a written Quality Assurance/ Quality Control (QA/QC) Plan no later than May 14, 2000. The written QA/QC Plan shall be kept on record and available for inspection upon request by the Executive Officer.

(F) On or before May 14, 2005, the owner or operator of any existing CEMS shall submit to the Executive Officer for approval:

(i) A certification signed by an authorized representative of the facility that the existing CEMS meets the requirements of Rule 218, Section (c), or,

(ii) An "Application for CEMS Modification", with the applicable fee(s) as specified in Rule 301, or,

(iii) An application for waiver according to Rule 218, Section (d)(1)(D)(i), with documentation supporting the required demonstration;

(2) Requirements for Existing SCEMS

(A) A SCEMS installed and granted final approval before May 14, 1999 shall be maintained and operated according to the provisions of Rule 218, Sections (b), (e), (f) and (g), and the requirements of Rule 218.1, Sections (c) and (d).

(B) A SCEMS application for initial and final approval submitted to the Executive Officer before May 14, 1999 shall be reviewed and approved by the Executive Officer according to the specifications and requirements of Rule 218.1, Sections (c) and (d). After final approval, the SCEMS shall be operated and maintained according to the provisions of Rule 218, Sections (b), (e), (f) and (g), and the requirements of Rule 218.1, Sections (c) and (d).

(C) Modifications requiring recertification to any existing SCEMS shall be reviewed and approved according to the conditions under Rule 218 Section (c)(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 (c)(1)(B)(i) or (ii), as applicable.

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(D) The owner or operator of an existing SCEMS operating on or before May 14, 1999 shall be required to comply with the provisions of Rule 218.1 Section (e) - "Time Sharing Requirements" and with the provisions of Rule 218.1 Sections (b) and (d), or, 40CFR60 Appendix 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 (c)(1)(B)(i) or (ii), as applicable.

(e) 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 Executive Officer. Records shall be maintained by the CEMS owner or operator for a minimum period of two years, unless otherwise specifically provided by another District regulation or permit conditions, and, shall be made available to the Executive Officer 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 two years unless otherwise specifically provided by another District regulation or permit conditions, and shall be made available to the Executive Officer upon request.

(f) 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 Executive Officer, to evaluate the accuracy

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and precision of the measurements. The summary shall be submitted once every six months to the Executive Officer, except when more frequent reporting is specifically required by another District rule, or the Executive Officer, 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-month period being reported, in the form and manner prescribed by the Executive Officer. The summary shall be maintained on-site in a retrievable and readable form and shall be made available to the Executive Officer 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 Executive Officer. 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 Executive Officer 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 (b) 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 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 District Rule 518.2 - Federal Alternative Operating Condition.

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(C) Regularly scheduled CEMS maintenance shall be deferred until the report required under Rule 218, Section (f)(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.

(g) Posting of Written Approval for New, Modified and Existing CEMS 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 District Rule 206, in a manner such that it is clearly visible, legible, and safely accessible. In the event that the equipment is 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 Executive Officer.

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(Adopted January 9, 1976)(Amended October 8, 1976)
(Amended February 2, 1979)(Amended October 5, 1979)
(Amended September 4, 1981)

Rule 219. Equipment Not Requiring a Written Permit Pursuant to Regulation II

A written permit shall not be required for the following equipment unless the equipment or process material is subject to Regulation IX or X, or unless the Executive Officer determines that the equipment may not operate in compliance with all District Rules and Regulations. Once the Executive Officer makes such a determination and written notification is given to the equipment owner or operator, the equipment shall thereafter be subject to Rules 201 and 203.

(a) Mobile Equipment

(1) Equipment mounted upon vehicles used exclusively to transport materials on streets or highways but not to include any equipment mounted on such vehicles that would otherwise require a permit under the provisions of these rules.

(b) Combustion and Heat Transfer Equipment

(1) Piston type internal combustion engines with a rating of 500 brake horsepower or less or gas turbine engines with a maximum heat input rate of 1,500,000 kilogram calories (5,950,000 BTU) per hour or less.

(2) Equipment except natural gas and crude oil production equipment, used exclusively as steam generators, steam superheaters, water boilers, water heaters, hydrocarbon heaters and closed heat transfer systems that have a maximum heat input rate of less than 5,040,000 kilogram calories (20,000,000 British Thermal Units) per hour (gross) and are fired exclusively with natural gas, liquefied petroleum gas or a combination of natural gas and liquefied petroleum gas.

(c) Structures and Equipment - General

(1) Structural changes which cannot change the quality, nature or quantity of air contaminant emissions.

(2) Repairs or maintenance not involving structural changes to any equipment for which a permit has been granted.

(3) Identical replacement in whole or in part of any equipment where a permit to operate had previously been granted for such equipment under Rule 203

except toroid type seals for storage tanks as specified by Rule 463(a)(1)(B)(iii).

(4) Equipment utilized exclusively in connection with any structure, which structure is designed for and used exclusively as a dwelling for not more than four families.

(5) Laboratory equipment used exclusively for chemical and physical analysis and bench scale or laboratory test equipment.

(6) Vacuum-producing devices used in laboratory operations or in connection with other equipment which does not require a written permit.

(7) Vacuum-cleaning systems used exclusively for industrial, commercial or residential housekeeping purposes.

(8) Natural-draft hoods, natural-draft stacks or natural-draft ventilators.

(d) General Utility Equipment

(1) Comfort air conditioning or ventilating systems which are not designed or used to remove air contaminants generated by or released from specific units of equipment.

(2) Refrigeration units except those used as or in conjunction with air pollution control equipment.

(3) Water cooling towers and water cooling ponds not used for evaporative cooling of process water or not used for evaporative cooling of water from barometric jets or from barometric condensers.

(4) Equipment used exclusively for steam cleaning.

(5) Equipment used exclusively for space heating other than boilers.

(6) Equipment used exclusively to compress or hold dry natural gas.

(e) Glass, Ceramic, Metallurgical Processing and Fabrication Equipment

(1) Crucible-type or pot-type furnaces with a brimful capacity of less than 7400 cubic centimeters (452 cubic inches) of any molten metal.

(2) Crucible furnaces, pot furnaces or induction furnaces with a capacity of 450 kilograms (992 pounds) or less each, in which no sweating or distilling is conducted and from which only the following metals are poured or in which only the following metals are held in a molten state:

(A) Aluminum or any alloy containing over 50 percent aluminum.

(B) Magnesium or any alloy containing over 50 percent magnesium.

(C) Lead or any alloy containing over 50 percent lead.

(D) Tin or any alloy containing over 50 percent tin.

(E) Zinc or any alloy containing over 50 percent zinc.

(F) Copper.

(G) Precious metals.

(3) Molds used for the casting of metals.

(4) Equipment used exclusively for inspection of metal products and control equipment venting exclusively such equipment.

(5) Ovens used exclusively for curing potting materials or castings made with epoxy resins.

(6) Brazing, soldering (but not solder leveling), welding, or oxygen-gaseous fuel cuting equipment (not including plasma arc), and control equipment venting exclusively such equipment.

(7) Equipment used exclusively for the sintering of glass or metal where no coke or limestone is used and control equipment venting exclusively such equipment.

(8) Foundry sand mold forming equipment to which no heat or chemical desiccant is applied, and control equipment venting exclusively such equipment.

(9) Equipment used exclusively for forging, pressing, rolling, or drawing of metals, or for heating metals exclusively with natural gas or electricity prior to forging, pressing, rolling or drawing, except those units which are equipped to be fired with fuel oil.

(10) Equipment used exclusively for heat treating glass or metals or used exclusively for case hardening, carburizing, cyaniding, nitriding, carbonitriding, siliconizing or diffusion treating of metal objects, except those units which are equipped to be fired with fuel oil.

(11) Ladles used in pouring molten metals.

(12) Tumblers used for the cleaning or deburring of metal.

(13) Die casting machines, except those used for copper base alloys or those with an integral furnace having a brimful capacity of more than 450 Kg (992 lbs.).

(14) Porcelain enameling furnaces, porcelain enameling drying ovens or vitreous enameling drying ovens, except those units fired with fuel oil.

(15) Kilns (not including wax burnout kilns) with a rating of 5,040,000 kilogram calories (20,000,000 BTU) per hour or less used exclusively for

firing ceramic ware, except those which are equipped to be fired with fuel oil.

(f) Abrasive Blasting Equipment

(1) Blast cleaning cabinets in which a suspension of abrasive in water is used and control equipment venting exclusively such equipment.

(2) Abrasive blast cabinet dust filter combination units where the total internal volume of the blast section is 1.5 cubic meters (53 cubic feet) or less.

(3) Enclosed equipment used exclusively for shot blast removal of flashing from rubber and plastics at sub-zero temperatures and control venting exclusively such equipment.

(4) Shot peening operations on non-ferrous materials, provided no surface material is removed, and control equipment venting exclusively such equipment.

(g) Machining Equipment

(1) Equipment used exclusively for buffing (except automatic and semi-automatic tire buffers), polishing, carving, mechanical cutting, drilling, machining, pressing, routing, sanding, surface grinding or turning, and control equipment exclusively venting such equipment.

(2) Equipment used exclusively for shredding of wood or the extruding, or storage of wood chips, sawdust, or wood shavings and control equipment exclusively venting such equipment.

(3) Equipment used exclusively to mill or grind coatings or molding compounds where all materials charged are in paste form.

(h) Printing and Reproduction Equipment

(1) Printing equipment without dryers.

(2) Photographic process equipment by which an image is reproduced upon material sensitized by radiant energy and control equipment venting exclusively such equipment.

(3) Printing equipment with dryers, electrically heated, or with a rating of 20,000,000 BTU per hour or less, equipped to fire natural gas or liquefied petroleum gas, used exclusively for the drying or baking of surface coatings which contain no volatile organic compounds.

(4) Platen presses used in laminating.

(i) Food Processing and Preparation Equipment

(1) Smokehouses for preparing food in which the maximum horizontal inside cross-sectional area does not exceed 2 sq. meters (21.5 square feet).

(2) Smokehouses using exclusively liquid smoke and which are completely enclosed with no vents to any control device or the atmosphere.

(3) Confection cookers where products are edible and intended for human consumption.

(4) Equipment used exclusively to grind, blend or package tea, cocoa, or roasted coffee and control equipment venting exclusively such equipment.

(5) Equipment used in eating establishments for the purpose of preparing food for human consumption.

(6) Ovens, mixers, scales and blenders used in bakeries where products are edible and intended for human consumption and control equipment venting exclusively such equipment.

(7) Equipment used exclusively for blending or packaging of spices.

(8) Cooking kettles where all the product in the kettle is edible and intended for human consumption (does not include deep frying equipment).

(j) Plastics and Rubber Processing Equipment

(1) Presses used for curing rubber products and plastic products.

(2) Ovens used exclusively for the curing of plastics, which are concurrently being vacuum held to a mold, or for softening or annealing of plastics.

(3) Equipment used exclusively for extruding rubber products or plastics or for pelletizing polystyrene foam scrap, except equipment used to extrude or to pelletize acrylics, polyvinyl chloride, polystyrene, and their copolymers.

(4) Equipment used for compression molding or injection molding of plastics and control equipment venting exclusively such equipment.

(5) Mixers, roll mills and calendars for rubber or plastics where no material in powder form is added and no organic solvents, diluents or thinners are used.

(6) Ovens used exclusively for the curing of vinyl plastisols by the closed-mold curing process.

(7) Equipment used exclusively for conveying and storing plastic pellets.

(k) Mixing and Blending Equipment

(1) Batch mixers of 0.2 cubic meters (7 cubic feet) or less rated working capacity.

(2) Equipment used exclusively for mixing and blending or materials to make adhesives where no organic solvents are used and no materials in powder form are added.

(3) Equipment used exclusively for mixing and blending of materials to make water emulsions of asphalt, grease, oils or waxes where no materials in powder or fiber form are added.

(4) Mills, mixers, post mixing stations and dispersers, with an internal volume of 950 liters (251 gallons) or less used exclusively to mix, grind, or thin liquid surface coatings, where none of the ingredients exceed 125°F and no supplemental heat is added.

(5) Equipment used exclusively to mix, grind, or thin inks where none of the ingredients charged except water exceed 135°F and no supplemental heat is added.

(6) Equipment with 950 liters (251 gallons) or less capacity used exclusively for mixing or blending of organic liquids and materials containing organic liquids.

(7) Concrete mixers, with a capacity of one cubic yard or less.

(1) Fabric Cleaning and Dyeing Equipment

(1) Equipment used exclusively for dyeing, stripping, or bleaching of textiles where no organic solvents, diluents or thinners are used.

(2) Lint traps used exclusively in conjunction with dry cleaning tumblers.

(m) Miscellaneous Process Equipment

(1) Equipment used exclusively for bonding lining to brake shoes.

(2) Equipment used exclusively to liquefy or separate oxygen, nitrogen, or the rare gases from air.

(3) Equipment using exclusively aqueous solutions for surface preparation, cleaning, and stripping. (Does not include chemical milling, copper strip etching, or the stripping of chromium.)

(4) Equipment used exclusively for electrolytic plating, electrolytic polishing or electrolytic stripping of brass, bronze, cadmium, copper, iron, lead, nickel, tin, zinc, and precious metals.

(5) Equipment used exclusively for chemical milling and having an exposed surface area of 2500 square centimeters (2.7 sq. ft.) or less.

(6) Equipment used exclusively for packaging of lubricants or greases.

(7) Equipment and control equipment venting exclusively such equipment, used exclusively, for tableting vitamins or pharmaceuticals, packaging pharmaceuticals and cosmetics or for coating pharmaceutical tablets, except tumbling equipment and control equipment venting such tumbling equipment.

(8) Equipment used exclusively for coating objects with oils, melted waxes or grease and which contain no organic solvents, diluents or thinners.

(9) Equipment used exclusively for coating objects by dipping in waxes or natural and synthetic resins which contain no organic solvents, diluents or thinners.

(10) Unheated, non-conveyorized, cleaning or coating equipment (does not include control enclosures)

(A) With an open surface area of 1.0 square meters (10.8 square feet) or less and an internal volume of 350 liters (92.5 gallons) or less. or

(B) Using only organic solvents with an initial boiling point of 150'C (302°F) or greater.

(11) Batch ovens of 1.5 cubic meters (53 cubic feet) or less of internal volume where no melting occur except:

(A) Ovens used to cure vinyl plastisols.

(B) Ovens used to debond brake shoes.

(12) Equipment used exclusively for washing and subsequent drying of materials and air pollution control equipment venting exclusively such equipment provided that no volatile organic materials are emitted and that no fuel oil can be burned in the process equipment,

(13) Equipment used exclusively for manufacturing soap or detergent bars, including mixing tanks. roll mills, plodders, cutters, wrappers, where no heating, drying or chemical reactions occur.

(14) Spray coating equipment operated within control enclosures.

(15) Airless spray coating equipment used exclusively for water reducible coatings.

(16) Spray coating equipment using a combined total of one gallon per day or less of coating material and solvent (does not include control enclosures).

(17) Spray coating equipment and control enclosure used exclusively in primary and secondary schools.

(18) Atmospheric generators.

(n) Storage and Transfer Equipment

(1) Equipment used exclusively for the storage and transfer of fresh commerical or purer grades of:

(A) Sulfric acid or phosphoric acid with an acid strength of 99 percent or less by weight.

(B) Nitric acid with an acid strength of 70 percent or less by weight.

(2) Equipment used exclusively for the storage of liquefied gases.

(3) Equipment used exclusively for the transfer of less than 75,700 liters (20,000 gallons) per day, or equipment used exclusively for the storage of the following:

(A) Unheated organic materials with an initial boiling point of 150°C (302°F) or greater, or with a vapor pressure of 5 mm Hg (0.1 psi) absolute or less at 21.1 C(70°F), or

(B) Fuel oils with 0.9042 specific gravity or higher (25° API or lower), or

(C) Fuel oils with 0.8251 specific gravity or higher (40° API or lower) and having a capacity of 150,000 liters (39,630 gallons) or less.

(4) Equipment used exclusively for transferring organic liquids, materials containing organic liquids, or compressed gases into containers of less than 225 liters (60 gallons) capacity, except equipment used for transferring more than 4000 liters (1,057 gallons) per day of materials with a vapor pressure greater than 77.5 mm Hg (1.5 psia) at operating conditions.

(Adopted November 4, 1977)(Amended August 7, 1981)

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 Sections 40826 and 40807, the Executive Officer 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 Executive Officer 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 Executive Officer 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 Executive Officer 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 Executive Officer. The Executive Officer 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 Board to rehear the matter. Such petition shall contain a verified statement of facts setting forth the basis for petitioner's claim that the Executive Officer improperly denied or revoked the exemption. The District Board, after considering the petition, may grant or deny a hearing. If it denies a hearing, it shall state the basis for its denial.

(Adopted January 4, 1985)

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 Executive Officer 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 Executive Officer.

(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.

(Adopted June 2, 2006)

RULE 223. EMISSION REDUCTION PERMITS FOR LARGE CONFINED ANIMAL FACILITIES

(a) Applicability

This rule establishes the permitting requirements for agricultural sources subject to permit as a result of California Health & Safety Code Section 40724.6 as effective January 1, 2004. A written Permit to Operate shall be required for all Large Confined Animal Facilities.

(b) Definitions

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

(1) AERATED STATIC PILE means a system designed, constructed, maintained, and operated for decomposing organic material in which the material is placed on top of perforated plates that are connected to blowers that either push or pull air through the piles. The system shall operate under negative or positive pressure for not less than 90% of its blower operation cycle and the exhaust shall be vented to a VOC control device with an overall capture and control efficiency of at least 80%.

(2) AEROBIC LAGOON means a lagoon designed, constructed, maintained, and operated in accordance with the Natural Resource Conservation Service (NRCS) Practice Standard 359 (Waste Treatment Lagoon), as of date of adoption of this rule, or more recent applicable standard.

(3) ALTERNATIVE MITIGATION MEASURE means a mitigation measure that is determined by the Executive Officer, California Air Resources Board (CARB), and United States Environmental Protection Agency (U.S. EPA) to achieve reductions that are equal to or exceed the reductions that would be achieved by other mitigation measures listed in this rule.

(4) ANAEROBIC TREATMENT means the decomposition of organic matter by microbes in the absence of oxygen.

(5) ANAEROBIC TREATMENT LAGOON means a lagoon designed, constructed, maintained, and operated in accordance with NRCS Practice Standard 359 (Waste Treatment Lagoon), as of date of adoption of this rule, or more recent applicable standard.

(6) ANIMAL WASTE means any animal excretion and mixtures containing animal excretions including, but not limited to, solids separated from animal excretions.

(7) BEST AVAILABLE RETROFIT CONTROL TECHNOLOGY (BARCT) 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.

(8) CERTIFIED NUTRITIONIST means a nutritionist certified by the American Registry of Professional Animal Scientists.

(9) CLASS ONE MITIGATION MEASURES: a mitigation measure or combination of measures for the specific source category that, at the time of rule adoption, are considered to be the best available retrofit control technology (BARCT), as defined in the California Health and Safety Code Section 40406.

(10) CLASS TWO MITIGATION MEASURES: a mitigation measure or combination of measures for the specific source category that, at the time of rule adoption, are considered to be more stringent than best available retrofit control technology (BARCT) standards for existing facilities taking into account environmental, energy, economic, legal, social, and technological factors.

(11) CONFINED ANIMAL FACILITY (CAF) means a source or group of sources of air pollution at an agricultural source for the raising of 3,360 or more fowl or 50 or more animals, including but not limited to, any structure, building, installation, farm, corral, coop, feed storage area, milking parlor, or system for the collection, storage, or distribution of solid and liquid manure; if domesticated animals, including but not limited to, cattle, calves, horses, sheep, goats, swine, rabbits, chicken, turkeys, or ducks are corralled, penned, or otherwise caused to remain in restricted areas for commercial agricultural purposes and feeding is by means other than grazing.

(12) DRY MANURE means animal waste with moisture content of less than 20%.

(13) EMISSION MITIGATION PLAN means a document that lists and describes all mitigation measures to be implemented at the LCAF.

The description shall be sufficiently detailed, such that another person could duplicate the measure by reading the description.

(14) FEED ALLEYWAY means the area where vehicles drive to distribute feed in the feed lane.

(15) FEED APRON means the area where the animals stand to consume feed in non-poultry operations.

(16) FEED LANE means the area where feed is placed and the area where animals stand to consume feed in non-poultry operations.

(17) FREESTALL means a structure for housing animals in which the animals are contained in large pens under a roof and have free access to feed bunks, water containers, and stalls for resting.

(18) IN-CORRAL MOUNDS means mounds of animal waste and/or soil which are constructed, designed, maintained, and operated by operators of LCAFs to allow animals to have a dry area to lay and rest during the wet season.

(19) LAGOON means a basin designed, constructed, maintained, and operated to store and biologically treat organic waste, such as animal manure, in accordance with NRCS Agricultural Waste Management Field Handbook Chapter 10, Section 651.1004, as of date of adoption of this rule, or more recent applicable guidance.

(20) LAND INCORPORATE means use of a method such as tilling, injecting, or plowing that covers animal waste with soil in accordance with NRCS Agricultural Waste Management Field Handbook Chapter 10, Section 651.1102, as of date of adoption of this rule, or more recent applicable guidance.

(21) LARGE CONFINED ANIMAL FACILITY (LCAF) means any confined animal facility that maintains on any one day:

1,000 or more milk-producing dairy cows; or
3,500 or more beef cattle; or
7,500 or more calves, heifers, or other cattle; or
100,000 or more turkeys; or
650,000 or more chickens other than laying hens; or
650,000 or more laying hens; or
3,000 or more swine; or
15,000 or more sheep, lambs, or goats; or
2,500 or more horses; or

650,000 or more ducks; or
30,000 or more rabbits or other animals.

(22) LICENSED VETERINARIAN means a veterinarian licensed by the State of California.

(23) LIVESTOCK means any domesticated animal kept or raised for the production of eggs, milk, or meat.

(24) MILKING COW means a cow that is currently producing milk (lactating).

(25) PHOTOTROPIC LAGOON means a lagoon where at least 10% of the bacteria in the lagoon are photosynthetic bacterium; the bacteriochlorophyll a concentration is above 1081 µg/L; or that is designed, constructed, maintained, and operated according to standards in a published NRCS guidance document for design and management of phototropic lagoons.

(26) PRECURSOR EMISSIONS means any emissions of air contaminants that contribute to the formation of ozone or particulates, including but not limited to, emissions of volatile organic compounds, oxides of nitrogen, and ammonia.

(27) SHADE STRUCTURE means a structure designed, constructed, maintained, and operated to provide shade for livestock that meets all of the standards listed in the NRCS Conservation Practice Standard for Livestock Shade Structure Code 717, as of date of adoption of this rule, or more recent applicable guidance

(28) SOLID SEPARATOR SYSTEM means a system for separating solid manure from liquid manure products that is designed, constructed, maintained, and operated in accordance with NRCS Practice Standard 632 (Solid/Liquid Waste Separation Facility), as of date of adoption of this rule, or more recent applicable standard. These may include, but are not limited to, flat belt separators, roller press separators, vibrating screen separators, stationary screen separators, and settling basins.

(29) SOURCE means any 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.

(30) STORAGE POND means a basin designed, constructed, maintained, and operated, to store manure and process water until utilization in accordance with NRCS Practice Standard 359 (Waste Treatment Lagoon), and does not meet the definition of a lagoon.

(c) Requirements

(1) On or after January 15, 2007, an owner or operator of a LCAF shall not build, erect, install, alter, replace, or operate any LCAF without first obtaining written authorization from the Executive Officer. The permit application shall include:

(A) The information that the Executive Officer determines is necessary to prepare an emissions inventory of all regulated air pollutants emitted from the operation, including, but not limited to, precursor and fugitive emissions, using emission factors approved by the Executive Officer; and

(B) List of all equipment and the regulating District rules; and

(C) List of all other sources of air pollution, including but not limited to, animals, birds, and lagoons; and

(D) Total capacity of the facility in terms of animal and bird population; and

(E) An emissions mitigation plan that demonstrates that the facility will use BARCT to reduce emissions of pollutants that contribute to the non-attainment of any ambient air quality standard, and that are within the District's regulatory authority. The emissions mitigation plan shall be based on the list of control measures outlined in Attachment A of this rule. At the time of application submittal, operators of LCAFs shall identify the control measures they plan to implement from the options available in Attachment A. Operators of LCAFs shall implement the identified control measures within one year of the date the measures are approved. For annual renewals, the measures must be implemented in accordance with the schedule approved by the Executive Officer.

(2) The Executive Officer shall act upon an application for permit submitted pursuant to this rule within six months of receipt of a complete application.

(3) Operators of LCAFs shall implement the control measures identified in their mitigation plan submitted pursuant to paragraph (c)(1) within one year of the date on which the permit is approved by the Executive Officer.

(4) On or before January 15, 2008, and each year thereafter, the owner or operator of a LCAF shall submit an annual compliance plan that updates the information required by sub-paragraphs (c)(1)(A) through (c)(1)(E) of this rule.

(5) Operators of LCAFs shall implement the new or amended emissions mitigation measures identified in their mitigation plan submitted pursuant to paragraph (c)(4) of this rule in accordance with the schedule approved by the Executive Officer.

(d) Compliance Determination

(1) Any violation of the permit conditions constitutes a violation of the this rule.

(2) Pursuant to District Rule 204, the Executive Officer may update LCAF permits upon annual renewal to include conditions necessary for compliance.

(e) Annual Renewal

(1) Permits to Operate for LCAF shall be renewed pursuant to Rule 204 and Rule 301(d).

(2) Plans submitted pursuant to paragraph (c)(4) shall not be subject to Rule 306 plan annual review/renewal fees unless the plan is modified or a new plan is submitted. For new and modified plans, owners shall remit the annual review/renewal fees pursuant to Rule 306.

(f) Recordkeeping

All owners of confined animal facilities, regardless of size, shall keep records that specify the monthly average number of animals maintained at the facility. Records shall be maintained and kept at the facility for three years or for five years if it is a Title V facility. These records shall be presented to the Executive Officer, or his designee, upon request.

(g) Noticing

Prior to issuing any permit for LCAF, the draft permit shall be available for public review and inspection for a period of not less than 30 calendar days.

(h) Non-duplication

Information required by paragraphs (c)(1) and (c)(4) that is submitted annually pursuant to other District Rules and Regulations, including annual emissions reporting (AER), may be excluded from the information requirements of this rule.

(i) Existing Permitted Facilities

Operators that have obtained a LCAF permit on or before June 2, 2006, or submitted a complete application to the District to obtain a LCAF permit on or before June 2, 2006, satisfy the information requirements of sub-clauses (c)(1)(A) through (c)(1)(D) of this rule for initial permitting.

(j) Other Provisions

(1) Any permit issued to a LCAF is subject to all applicable provisions of the California Health & Safety Code and the District Rules and Regulations.

(2) An LCAF operator may temporarily suspend implementation of a feed or animal housing mitigation measure provided:

(A) It is determined by a licensed veterinarian or certified nutritionist that the mitigation measure is detrimental to animal health, or that suspension of the mitigation measure is necessary for the animal to molt; and

(B) The operator notifies the District, within forty eight (48) hours of the determination that the mitigation measure is being temporarily suspended; the specific health condition requiring the mitigation measure to be suspended; and the duration that the measure must be suspended for animal health reasons; and

(C) The emission mitigation measure is not suspended for longer than recommended by the licensed veterinarian or certified nutritionist; and

(D) If such a condition exists, or is expected to exist for longer than thirty (30) days, the operator shall, within that thirty (30) day period, submit a new emission mitigation plan designating a

mitigation measure to be implemented in lieu of the mitigation measure that was suspended; and

(E) The Executive Officer approves the temporary suspension of the mitigation measure for the time period requested by the operator.

APPENDIX A: LARGE CAF MITIGATION MEASURES

Owners/operators of a LCAF that is a Dairy shall also comply with the following applicable requirements:

Table 1 - Dairy LCAF Mitigation Measure Requirements

(A).	**Feed and Silage Operations:** Owners/operators shall incorporate at least five (5) of the following feed and silage mitigation measures:
Class One Mitigation Measures	
1.	Feed according to National Research Council (NRC) guidelines.
2.	Feed animals high moisture corn or steam-flaked corn and not feed animals dry rolled corn.
3.	Remove spoiled feed from feed lane at least once every seven (7) days
4.	Remove spilled feed from feed alleyways at least bi-weekly.
5.	Remove uneaten wet feed from feed bunks within twenty-four (24) hours of a rain event.
6.	Feed or dispose of rations within forty-eight (48) hours of grinding and mixing rations.
7.	Store grain in a weatherproof storage structure from October through May.
8.	Cover the horizontal surface of silage piles, except for the area where feed is being removed from the pile.
9.	Collect leachate from the silage piles and send it to a waste treatment system such as a lagoon at least once every twenty-four (24) hours.
10.	Implement alternative mitigation measure(s), not listed above, subject to approval of the Executive Officer.
Class Two Mitigation Measures	
11.	a. Enclose silage in a silage bag system designed for that purpose, or b. Enclose silage in a weatherproof structure and vent to a control device with at least 80% control efficiency, or c. Eliminate silage from animal diet.

(B).	**Milk Parlor:** Owners/operations shall incorporate at least one (1) of the following mitigation measures in each milk parlor:
Class One Mitigation Measures	
1.	a. Flush or hose milk parlor immediately prior to, immediately after, or during each milking in accordance with the recommendations in NRCS Agricultural Waste Management Field Handbook Chapter 10 Section 651.1002 or more recent NRCS guidance.
2.	Implement alternative mitigation measure(s), not listed above, subject to approval of the Executive Officer.
Class Two Mitigation Measures	
3.	a. Enclose and vent the milk parlor to a control device certified by the District to achieve at least 80% capture and control efficiency when animals are in the parlor.

Table 1 - Dairy LCAF Mitigation Measure Requirements (Continued)	
(C).	**Freestall Barns:** Owners/operations housing animals in freestalls shall incorporate at least two (2) of the following mitigation measures in each freestall barn.
Class One Mitigation Measures	
1.	Vacuum or scrape freestalls consistent with, during, after, or prior to each milking. Vacuum or scrape freestalls in accordance with NRCS Agricultural Waste Management Field Handbook Chapter 10 Section 651.1002 or more recent NRCS guidance.
2.	Inspect water pipes and troughs and repair leaks at least once a day.
3.	Use non-manure-based bedding for at least 90% of the bedding material, by weight, for freestalls (e.g. rubber mats, almond hulls, sand, or waterbeds).
4.	Remove wet manure from individual cow freestall beds at least once a day.
5.	Rake, harrow, scrape, or grade bedding in freestalls at least twice every seven (7) days.
6.	Use a dry manure handling system, such as scraping, instead of a liquid manure handling system such as a flush system.
7.	Have no animals in exercise pens, corrals, or dry lots at any time.
8.	Flush freestalls more frequently than the milking schedule. Flush in accordance with NRCS Agricultural Waste Management Field Handbook Chapter 10 Section 651.1002 or more recent NRCS guidance.
9.	Implement alternative mitigation measure(s), not listed above, subject to approval of the Executive Officer.

(D).	**Corrals:** Owners/operators housing animals in corrals shall incorporate at least six (6) of the following mitigation measures in each corral where animals have been housed in the last thirty (30) days.
Class One Mitigation Measures	
1.	a. Clean manure from corrals at least four (4) times per year with at least sixty (60) days between cleaning, or b. Clean corrals at least once between April and July and at least once between October and December, or c. Clean concreted areas such that the depth of manure does not exceed twelve (12) inches at any point or time, except for in-corral mounding, or d. Manage corrals such that the manure depth in the corral does not exceed. twelve (12) inches at any time or point, except for in-corral mounding.
2.	Knockdown fence line manure build-up prior to it exceeding a height of twelve (12) inches at any time or point.
3.	Scrape or flush feed aprons in accordance NRCS Agricultural Waste Management Field Handbook Chapter 10 Section 651.1002, or more recent NRCS guidance in all corrals at least once every seven (7) days.
4.	Slope the surface of the pens at least 3% where the available space for each animal is 400 square feet or less. Slope the surface of the pens at least 1.5% where the available space for each animal is more than 400 sq. feet per animal.
5.	a. Maintain corrals to ensure drainage and prevent water from standing more than

Table 1 - Dairy LCAF Mitigation Measure Requirements (Continued)	
	forty-eight (48) hours after a storm, or b. Maintain corrals and drylots so that there are no indentions in the surface where puddles may form and remain for more than forty-eight (48) hours.
6.	Install floats on the troughs or use another method approved by the Executive Officer to ensure that the water in the troughs does not intentionally or unintentionally overflow or spill onto an earthen ground.
7.	Inspect water pipes and troughs and repair leaks at least once a day.
8.	Harrow, rake, or scrape pens sufficiently to maintain a dry surface, unless the corrals have not held animals in the last thirty (30) days.
9.	a. Use lime or a similar absorbent material in the pens according to the manufacturer's recommendations to minimize moisture in the pens, or b. Apply thymol to corral soil in accordance with the manufacturer's recommendation, or c. Apply eugenol to corral soil in accordance with the manufacturer's recommendation.
10.	Implement alternative mitigation measure(s), not listed above, subject to approval of the Executive Officer
Class Two Mitigation Measures	
11.	Install shade structures.
12.	House animals in an enclosure vented to a control device certified by the District to achieve at least 80% control efficiency.

(E).	**Handling of Solid Manure or Separated Solids:** Owners/operators that handle or store solid manure or separated solids outside the animal housing shall incorporate at least two (2) of the following mitigation measures:
Class One Mitigation Measures	
1.	Cover dry manure piles outside the pens with a waterproof covering from October through May, except for times, not to exceed twenty-four (24) hours per year, when wind events remove the covering. The covering shall be in accordance with applicable recommendations in NRCS Agricultural Waste Management Field Handbook Chapter 10 Section 651.1003, or more recent NRCS guidance.
2.	Cover dry separated solids outside the pens with a waterproof covering from October through May, except for times, not to exceed twenty-four (24) hours each, when wind events remove the covering. The covering shall be in accordance with NRCS Agricultural Waste Management Field Handbook Chapter 10 Section 651.1003 or more recent NRCS guidance.
3.	Remove manure from the facility within seventy-two (72) hours of removal from the pens or corrals.
4.	Implement alternative mitigation measure(s), not listed above, subject to approval of the Executive Officer.
Continued on next page	

Table 1 - Dairy LCAF Mitigation Measure Requirements (Continued)	
Class Two Mitigation Measures	
5.	Compost manure removed from pens with an aerated static pile vented to a biofilter or other control device with at least 80% control efficiency designed, constructed, operated, and maintained in accordance with NRCS Practice
	Standard 317 (Composting Facility), or more recent NRCS standard.
6.	Store all removed manure in an enclosure vented to a control device with at least 80% control efficiency.
7.	Send at least 51% of the animal waste removed from site to a digester, with a control device with a control efficiency of at least 80%, within seventy-two (72) hours of removal from the housing. The digester shall be designed, constructed, maintained, and operated in accordance with NRCS Practice Standard 365 (Anaerobic Digester – Ambient Temperature and Practice Standard 366 (Anaerobic Digester – Controlled Temperature), or more recent NRCS standard.

(F).	**Handling Manure in Liquid Form:** Owners/operators that handle manure in a liquid form shall incorporate at least one (1) of the following mitigation measures:
Class One Mitigation Measures	
1.	Manage the facility such that lagoons only contain waste from the milking parlor and storm water.
2.	a. Use phototrophic lagoons, or b. Use an anaerobic treatment lagoon
3.	Remove solids from the waste system with a solid separator system, prior to the waste entering the lagoon.
4.	Maintain lagoon at a pH between 6.5 and 7.5.
5.	Implement alternative mitigation measure(s), not listed above, subject to approval of the Executive Officer.
Class Two Mitigation Measures	
6.	a. Use an aerobic lagoon, or b. Use a mechanically aerated lagoon designed, constructed, maintained, and operated in accordance with the recommendations in NRCS Practice Standard 559 (Waste Treatment Lagoon), or more recent NRCS standard, or c. Maintain organic loading in the lagoon such that the total solids is less than 3.5 mg (dry weight)/mL, or total volatile solids is less than 3.5 mg/mL.
7.	Use additional non-standard equipment or chemicals on the solid separator system, such as roller or screw presses or chemical coagulants and flocculants, that increase the percent of solid separation achieved by the separator and that is approved by the Executive Officer.
8.	Cover the lagoon or storage pond and vent to a control device with at least 80% control efficiency.
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Table 1 - Dairy LCAF Mitigation Measure Requirements (Continued)	
(G).	**Land Application of Liquid or Dry Manure:** Owner/operators who land apply dry or liquid manure to crop land on the facility shall incorporate at least two (2) of the following mitigation measures:
Class One Mitigation Measures	
1.	a. Land incorporate all manure within seventy-two (72) hours of removal in accordance with the recommendations of NRCS Agriculture Waste Management Field Handbook Chapter 11 Section 651.1102, or more recent NRCS standards, or b. Only apply manure that has been treated with an anaerobic digestion process or aerobic lagoon or digester system designed, constructed, maintained, and operated in accordance with the appropriate NRCS Practice Standard 629 (Waste Treatment), Practice Standard 359 (Waste Treatment Lagoon), Practice Standard 365 (Anaerobic Digester – Ambient Temperature and Practice Standard 366 (Anaerobic Digester – Controlled Temperature), or more recent NRCS standard.
2.	Allow liquid manure to stand in the fields no more than twenty-four (24) hours after irrigation and apply liquid manure in accordance with the recommendations of NRCS Agriculture Waste Management Field Handbook Chapter 11 Section 651.1102, or more recent NRCS standards.
3.	Only apply solid manure that has a moisture content of less than 50% in accordance with the recommendations of NRCS Agriculture Waste Management Field Handbook Chapter 11 Section 651.1102, or more recent NRCS standards.
4.	Implement alternative mitigation measure(s), not listed above, subject to approval of the Executive Officer.

Note:

1. An owner/operator may temporarily suspend utilization of a mitigation measure provided all of the following requirements are met:
   (a) It is determined by a certified veterinarian or nutritionist that the mitigation measure may be detrimental to animal health or that suspension of the mitigation measure is necessary for the animal to molt, and
   (b) The operator notifies the District, within forty-eight (48) hours of the veterinarian's or nutritionist's determination, that a measure is being temporarily suspended, and
   (c) If such a situation exists, or is expected to exist for longer than thirty (30) days, the owners/operators shall, within that thirty (30) day period, submit a new mitigation measure to be implemented in lieu of the mitigation measure that was suspended.

2. An owner/operator may substitute a mitigation measure from one section in the applicable table (tables 2 through 6) for a mitigation measure in another section of the applicable table, provided it is demonstrated, to the satisfaction of the Executive Officer, that the substitution would result in equal or greater emission reductions. Substituted measures shall be requested by submittal of

an application to modify the mitigation plan required by Rule 223(c)(4) with remittance of fees pursuant to Rule 306.and shall be included as permit requirements.

3. For the purposes of this attachment, the term "Executive Officer" when used for the approval of alternate mitigation measures means the Executive Officer of the SCAQMD, CARB, and U.S. EPA.

Owners/operators of a LCAF that is a Poultry Operation shall also comply with the following applicable requirements:

Table 2 – Poultry Operations LCAF Mitigation Measure Requirements

(A).	**Poultry House:** Each poultry house shall incorporate at least four (4) of the following mitigation measures:
Class One Mitigation Measures	
1.	a. Remove cake manure daily in accordance with the recommendation of NRCS Agricultural Waste Management Field Handbook Chapter 10 Section 651.1002, or more recent NRCS guidance, or b. Clean under poultry cages daily in accordance with the recommendation of NRCS Agricultural Waste Management Field Handbook Chapter 10 Section 651.1002, or more recent NRCS guidance.
2.	Use poultry litter additives designed to reduce air emissions or moisture content in litter, such as aluminum sulfate or sodium bisulfate, according to manufacturer recommendations.,.
3.	Use a dry housing cleaning method at all times, except when a wet cleaning method is required for animal health or biosecurity issues.
4.	Use drinkers that do not drip.
5.	Adjust the height, volume, and location of drinkers daily.
6.	Use evaporative cooling pad or tunnel ventilation with no foggers in houses.
7.	Slope the ground of the houses or pens a minimum of 3%.
8.	Install mounds or berms up gradient to prevent the runoff of stormwater into pens (only an option for animals allowed to freely move between indoor housing structures and outdoor pens)
9.	Inspect water pipes and drinkers and repair leaks at least once a day.
10.	Maintain the roof structure and manage roof runoff in accordance with the recommendations of NRCS Practice Standard 561 – Heavy Use Area Protection, or more recent NRCS standards.
11.	Only use fogger systems designed, operated and maintained according to manufacturer recommendations that provide water droplets with an average size of 50 microns or less.
12.	Implement alternative mitigation measure(s), not listed above, subject to approval of the Executive Officer.
Class Two Mitigation Measures	
13.	Vent housing to a VOC control device with an overall VOC capture and control efficiency of at least 80%.
14.	a. Use a belt litter removal system that dries the litter, or b. House animals in a tunnel ventilated houses with mechanical ventilation, or c. Use a litter drying system, such as a flat bed drying system.
	Continued on next page

Table 2 – Poultry Operations LCAF Mitigation Measure Requirements (Continued)

(B).	**Feed Operations:** Owners/operators shall incorporate at least five (5) of the following feed mitigation measures:
Class One Mitigation Measures	
1.	a. Feed according to NRC guidelines, or b. Feed animals probiotics designed to improve digestion according to manufacturer recommendations, or c. Feed animals an amino acid supplemented diet to meet their nutrient requirements, or d. Feed animals feed additives such as amylase, xylanase, and protease, designed to maximize digestive efficiency according to manufacturer recommendations.
2.	Remove spilled feed from housing at least once every seven (7) days.
3.	Enclose grain in a weatherproof storage structure from October through May.
4.	Feed or dispose of feed within forty-eight (48) hour of grinding and mixing feed.
5.	Remove wet feed from animal housing within twenty-four (24) hours of a rain event.
6.	Remove spilled feed from facility at least once every seven (7) days.
7.	Implement alternative mitigation measure(s), not listed above, subject to approval of the Executive Officer.

(C).	**Handling of Solid Manure or Separated Solids:** Owners/operators that handle or store solid manure or separated solids outside the animal housing shall incorporate at least one (1) of the following mitigation measures:
Class One Mitigation Measures	
1.	a. Remove all animal waste from site within seventy-two (72) hours of removal from housing, or b. Send all animal waste to a storage facility designed, constructed, maintained, and operated to the recommendations in NRCS Practice Standard 313 (Waste Storage Facility) or more recent NRCS standard.
2.	Cover animal waste outside the housing with a waterproof covering from October through May, except for times, not to exceed twenty-four (24) hours per year, when wind events remove the covering, the covering shall be in accordance with applicable recommendations in NRCS Agricultural Waste Management Field Handbook Chapter 10 Section 651.1003, or more recent NRCS guidance.
3.	Use a dry manure handling system in housing, such as stockpiles, solid land application, or a thin bed manure drying system, instead of a wet system such as flushing, manure storage ponds, or manure treatment lagoons.
4.	Implement alternative mitigation measure(s), not listed above, subject to approval of the Executive Officer.
Class Two Mitigation Measures	
5.	Store all removed animal waste in an enclosure vented to a control device with at least 80% control efficiency.
Continued on next page	

Table 2 – Poultry Operations LCAF Mitigation Measure Requirements (Continued)

6.	Send at least 51% of the animal waste removed from site to a digester, with a control device a control efficiency of at least 80%, within seventy two (72) hours of removal from housing. The digester shall be designed, constructed, maintained, and operated in accordance with NRCS Agricultural Waste Management Field Handbook Chapter 10 Section 651.1006, or more recent NRCS guidance.
7.	Compost animal waste removed from the housing with an aerated static pile vented to a control device with at least 80% control efficiency designed, constructed, operated, and maintained in accordance with NRCS Agricultural Waste Management Field Handbook Chapter 10 Section 651.1004, or more recent NRCS guidance.

(D).	**Handling of Manure in Liquid Form:** Owners/operators that handle manure in a liquid form shall incorporate at least one (1) of the following mitigation measures:
Class One Mitigation Measures	
1.	Manage the facility such that only storm water and water used to wash eggs enters the lagoon.
2.	a. Use phototrophic lagoons, or b. Use an anaerobic treatment lagoon designed, constructed, maintained, and operated in accordance with NRCS Agricultural Waste Management Field Handbook Chapter 10 Section 651.1004, or more recent NRCS guidance.
3.	Remove solids from the waste system with a solid separator system, prior to the waste entering the lagoon that is designed, constructed, operated, and maintained in accordance with NRCS Practice Standard 629 (Waste Treatment), or more recent NRCS standard.
4.	Maintain lagoon at a pH between 6.5 and 7.5.
5.	Implement alternative mitigation measure(s), not listed above, subject to approval of the Executive Officer.
Class Two Mitigation Measures	
6.	a. Use aerobic lagoons designed, constructed, maintained, and operated to the recommendations in NRCS Agricultural Waste Management Field Handbook Chapter 10 Section 651.1004 or more recent NRCS guidance, or b. Use a mechanically aerated lagoon designed, constructed, maintained, and operated according to the recommendations in NRCS Agricultural Waste Management Field Handbook Chapter 10 Section 651.1004 or more recent NRCS guidance, or c. Maintain organic loading in the lagoon that is less than 3.5 mg (dry weight)/mL, or total volatile solids is less than 3.5 mg/mL.
7.	Use additional non-standard equipment or chemicals on the solid separator system, such as roller or screw presses or chemical coagulants and flocculants that increase the percent of solid separation achieved by the separator and is approved by the Executive Officer.
Continued on next page	

Table 2 – Poultry Operations LCAF Mitigation Measure Requirements (Continued)

8.	Cover the lagoon or storage pond and vent to a biofilter or a control device with at least 80% control efficiency.

Note:

1. An owner/operator may temporarily suspend utilization of a mitigation measure provided all of the following requirements are met:
   (a) It is determined by a certified veterinarian or nutritionist that the mitigation measure may be detrimental to animal health or that suspension of the mitigation measure is necessary for the animal to molt, and
   (b) The operator notifies the District, within forty-eight (48) hours of the veterinarian's or nutritionist's determination, that a measure is being temporarily suspended, and
   (c) If such a situation exists, or is expected to exist for longer than thirty (30) days, the owners/operators shall, within that thirty (30) day period, submit a new mitigation measure to be implemented in lieu of the mitigation measure that was suspended.

2. An owner/operator may substitute a mitigation measure from one section in the applicable table (tables 2 through 6) for a mitigation measure in another section of the applicable table, provided it is demonstrated, to the satisfaction of the Executive Officer, that the substitution would result in equal or greater emission reductions. Substituted measures shall be requested by submittal of an application to modify the mitigation plan required by Rule 223(c)(4) with remittance of fees required by Rule 306, and shall be included as permit requirements.

3. For the purposes of this attachment, the term "Executive Officer" when used for the approval of alternate mitigation measures means the Executive Officer of the SCAQMD, CARB, and U.S. EPA.

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

(Adopted Feb. 4, 1977)(Amended May 27, 1977)(Amended Jan. 6, 1978)
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(Amended July 12, 2019)

Effective Date July 12, 2019

RULE 301. PERMITTING AND ASSOCIATED FEES

~~(a) Applicability~~

California Health and Safety Code Section 40510 provides authority for the South Coast Air Quality Management District to adopt a fee schedule for the issuance of permits to cover the cost of evaluation, planning, inspection, and monitoring related to that activity. This rule establishes such a fee schedule and requires that fees be paid for:

(1) Permit processing for Facility Permits [see subdivisions (l), (m), and (n)], Facility Registrations [see subdivision (t)], and Permits to Construct and/or Permits to Operate equipment (submitted pursuant to Regulation II) that may cause air pollution or equipment intended to control air pollution [see subdivision (c)].

(2) Processing of applications for banking emission reduction credits; change of title of emissions reduction credits; alteration/modification of emission reduction credits; retirement of short term emission reduction credits for transfer into Rule 2202; and the transfer of ERCs out of Rule 2202 pursuant ~~to Rule 2202 (h)(4); or conversion of emissions reduction credits, mobile~~

~~device fee(s) are not paid, the application(s) associated with the device(s)~~ shall expire and no longer be valid. For a Title V facility, if the Title V facility fee, which is not based on any specific equipment but applies to the whole facility, is not paid, the Title V facility permit shall expire. In such a case, the owner/operator will be notified by mail, electronic mail, or other electronic means, of the expiration and the consequences of operating equipment without a valid permit, as required by Rule 203 (Permit to Operate). For the purpose of this paragraph, the fee payment will be considered to be received by the District if it is delivered, postmarked, or electronically paid on or before the expiration date stated on the billing notice. If the expiration date falls on a Saturday, Sunday, or a state holiday, the fee payment may be delivered, postmarked, or electronically paid on the next business day following the Saturday, Sunday, or state holiday with the same effect as if it had been postmarked on the expiration date.

(9) Annual Operating Fees for Redundant Emission Controls

Any person holding permits to operate for two or more emission controls applicable to the same equipment who establishes that any of the emission controls is redundant, i.e., not necessary to assure compliance with all applicable legal requirements, shall not be required to pay annual operating permit renewal fees under subdivision (d) for the redundant equipment. The Executive Officer may reinstate the obligation to pay such fees at any time upon determination that operating the control is or has become necessary to ~~assure compliance with any applicable legal requirements.~~

(e) Annual Operating Emissions Fees

(1) Annual Operating Emission Fee Applicability

In addition to the annual operating permit renewal fee, the owner/operator of all equipment operating under permit shall pay annual emissions fees if any of the criteria in subparagraphs (e)(1)(A) through (e)(1)(C) are met.

(A) The owner/operator of a facility operates equipment under at least one permit.

(B) The total weight of emissions at a facility are greater than or equal to the thresholds for any of the contaminants specified in paragraph (e)(5), except for ammonia, 1,1,1 trichloroethane, and chlorofluorocarbons, from all equipment used by the owner/operator at all locations. The total weight of emissions of each of the contaminants specified in paragraph (e)(5) includes:

(i) Emissions from permitted equipment

(ii) Emissions resulting from all products which continue to passively emit air contaminants after they are manufactured, or processed by such equipment, with the exception of such product that is shipped or sold out of the District so long as the manufacturer submits records which will allow for the determination of emissions within the District from such products.

(iii) Emissions from equipment or processes not requiring a written permit pursuant to Regulation II.

~~(C) The owner/operator of a facility that reports emissions to the District pursuant to CARB's Criteria and Toxics Reporting Regulation (17 California Code of Regulations section 93400 et seq.) or pursuant to CARB's AB 2588 Air Toxics "Hot Spots" Emission Inventory Criteria and Guidelines Regulation (17 California Code of Regulations section 93300.5).~~

(2) Emissions Reporting and Fee Calculation

All major stationary sources of NOx and VOC, as defined in Rule 317, shall annually report and pay the appropriate clean air act non-attainment fees for all actual source emissions including but not limited to permitted, unpermitted, unregulated and fugitive emissions. Each facility subject to subparagraph (e)(1)(B) shall annually report all emissions for all pollutants listed in paragraph (e)(5) and Table IV and incur an emissions fee as prescribed in Table III.

Non-permitted emissions which are not regulated by the District shall not be reported and shall be excluded from emission fees if the facility provides a demonstration that the emissions are not regulated and maintains sufficient records to allow the accurate demonstration of such non-regulated emissions.

~~(3) Exception for the Use of Clean Air Solvents~~

An owner/operator shall not pay a fee for emissions from the use of Clean Air Solvents issued a valid Certificate from the District so long as the facility submits separate records which allow the determination of annual emissions, usage, and identification of such products. A copy of the Clean Air Solvent certificate issued to the manufacturer or distributor shall be submitted with the separate records.

~~(4) Flat Annual Operating Emission Fee~~

~~The owner/operator of all equipment subject to paragraph (e)(1)(A) (not including certifications, registrations or plans) shall each year be assessed a flat annual emissions fee of $136.40.~~

(5) Emission Fee Thresholds

Air Contaminant(s)	Annual Emissions Threshold
Gaseous sulfur compounds (expressed as sulfur dioxide)	≥4 TPY
Total organic gases (excluding methane and exempt compounds as defined in Rule 102, and specific organic gases as specified in subdivision(b))	≥4 TPY
Specific organic gases as specified in subdivision (b)	≥4 TPY
Oxides of nitrogen (expressed as nitrogen oxide)	≥4 TPY
Total particulate matter	≥4 TPY
Carbon monoxide	≥100 TPY
Ammonia	≥0.1 TPY
Chlorofluorocarbons	≥1 lb per year
1,1,1 Trichloroethane	≥1 lb per year

~~(6) Clean Fuels Fee Thresholds~~

Each facility emitting 250 tons or more per year (≥ 250 TPY) of Volatile Organic Compounds, Nitrogen Oxides, Sulfur Oxides and Particulate Matter shall pay an annual clean fuels fee as prescribed in Table V (California Health and Safety Code Section 40512).

(7) Fees for Toxic Air Contaminants

Each facility subject to subparagraph (e)(1)(B) or (C) emitting a toxic air contaminant greater than or equal to the annual thresholds listed in Table IV shall be assessed annual emissions fees as indicated in subparagraphs (e)(7)(A). The annual emissions fees for toxic air contaminants shall be based on the total weight of emissions of these contaminants associated with all equipment and processes including, but not limited to, material usage, handling, processing, loading/unloading; combustion byproducts, and ~~fugitives (equipment/component leaks).~~

~~(B) The following facilities are exempt from paying specified toxics~~ emissions fees:

(i) Any dry cleaning facility that emits less than two (2) tons per year of perchloroethylene, and qualifies as a small business as defined in the general definition of Rule 102 shall be exempt from paying any fees listed in subparagraph (e)(7)(A).

(ii) Any facility that emits less than two (2) tons per year, of formaldehyde, perchloroethylene, or methylene chloride, may petition the Executive Officer, at least thirty (30) days prior to the official submittal date of the annual emissions report as specified in paragraph (e)(10), for exemption from formaldehyde, perchloroethylene, or methylene chloride fees as required in subparagraph (e)(7)(A). Exemption from emissions fees shall be granted if the facility demonstrates that no alternatives to the use of these substances exist, no control technologies exist, and that the facility qualifies as a small business as defined in the general definition of Rule 102.

(iii) Any facility that is located more than one mile from a residential or other sensitive receptor shall be exempt ~~from paying fees in clause (e)(7)(A)(iii).~~

(8) Reporting of Total Emissions from Preceding Reporting Period and Unreported or Under-reported Emissions from Prior Reporting Periods

(A) The owner/operator of equipment subject to paragraph (e)(2) shall report to the Executive Officer the total emissions for the immediate preceding reporting period of each of the air contaminants listed in Table III and Table IV from all equipment. The report shall be made at the time and in the manner prescribed by the Executive Officer. The permit holder shall report the total emissions for the twelve (12) month period reporting for each air contaminant concerned from all equipment or processes, regardless of the quantities emitted.

(B) The Executive Officer will determine default emission factors applicable to each piece of permitted equipment or group of permitted equipment, and make them available to the owner/operator in a manner specified by the Executive Officer and

provide them to the owner/operator upon request. In determining emission factors, the Executive Officer will use the best available data. A facility owner/operator can provide alternative emission factors that more accurately represent actual facility operations subject to the approval of the Executive Officer.

(C) A facility owner/operator shall report to the Executive Officer, in the same manner, and quantify any emissions of air contaminants in previous reporting periods which had not been reported correctly and should have been reported under the requirements in effect in the reporting period in which the emissions occurred.

(D) The reported emissions shall be certified by an authorized official. For purposes of reporting, an "authorized official" is defined as an individual who has knowledge and responsibility for emissions data and has been authorized by an officer of the permit holder to submit and certify the accuracy of the data presented in the emissions report on behalf of the permit holder, based on best available knowledge.

~~(9) Request to Amend Emissions Report and Refund of Emission Fees~~

~~(A) A facility owner/operator shall submit a written request (referred to as an "Amendment Request") for any proposed revisions to previously submitted annual emissions reports. Amendment requests with no fee impact, submitted after one (1) year and seventy five (75) days from the official due date of the subject annual emissions report shall include a non-refundable standard evaluation fee of $355.99 for each subject facility and reporting period. Evaluation time beyond two hours shall be assessed at the rate of $178.03 per hour and shall not exceed ten (10) hours. Amendment requests received within one year (1) and seventy five (75) days from the official due date of a previously submitted annual emissions report shall not incur any such evaluation fees. The Amendment Request shall include all supporting documentation and copies of revised applicable forms.~~

~~(B) A facility owner/operator shall submit a written request (referred to as a "Refund Request") to correct the previously submitted annual emissions reports and request a refund of overpaid emission fees. Refund Requests must be submitted within one (1) year and seventy five (75) days from the official due date of the subject annual emissions report to be considered valid. The Refund Request shall~~

(Adopted December 5, 2008) (Amended February 4, 2011)

RULE 317. CLEAN AIR ACT NON-ATTAINMENT FEES

(a) Purpose

The purpose of this rule is to satisfy requirements as specified in Sections 182(d), 182(e), 182(f) and 185 of the 1990 amendments to the federal Clean Air Act (CAA) by utilizing a fee equivalency approach applying the principle in Section 172(e) of the CAA.

(b) Definitions

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

(1) ATTAINMENT YEAR is the calendar year that the Clean Air Act establishes for the Basin to reach attainment of the federal one-hour ozone standard pursuant to the CAA. Under the Severe 17 area designation, the attainment year is 2007. Under the Extreme area designation, the attainment year is 2010.

(2) BASELINE EMISSIONS are emissions of VOC, NOx or both, (including major stationary source fugitive and unpermitted emissions), for which a source qualifies as a major stationary source, calculated using source information as reported to or amended by the District, through the District's Annual Emissions Report (AER) program, as follows:

(A) For an existing major stationary source prior to or during the attainment year, the baseline emissions shall be the average amount of the actual emissions, including fugitive~~s~~ and unpermitted emissions, during fiscal years 2005-06 and 2006-07 (emissions not to exceed allowables), and programmatically adjusted to account for regulatory effects between 2006 through 2010, for the South Coast Air Basin. For an existing major stationary source in the Salton Sea Air Basin prior to or during the attainment year the baseline emissions shall be AER emissions as reported to the District or amended by the District for the attainment year (emissions not to exceed allowables).

(B) For sources that become subject to this rule after the attainment year:

(i) For a non-RECLAIM major stationary source the baseline emissions shall be the amount of emissions allowed under the applicable implementation plan or the potential to emit (annual emissions including fugitives and emissions from unpermitted equipment).

(ii) For an existing RECLAIM source that subsequently qualifies as a major stationary source for the purposes of this rule the baseline emissions shall be the higher of the RTC holdings at the beginning of the year available for use during the same calendar year or actual emissions during the calendar year the source becomes a major stationary source that do not exceed the RTC holdings at the end of the reconciliation period.

(iii) For a new RECLAIM source that qualifies as a major stationary source for the purposes of this rule the baseline emissions shall be the higher of RTC holdings purchased at the beginning of the attainment year or the initial calendar year of operation, as applicable, or actual emissions during the calendar year, not to exceed RTC holdings at the end of the reconciliation period.

If a major stationary source is operational for a period of less than one calendar year in the attainment year or later, the allowable emissions or RTC credits or holdings based on subparagraph (b)(2)(B) (i through iii) as applicable, in the attainment year or initial year of operation, (including unpermitted and fugitives) shall be extrapolated over one full calendar year.

(3) BASIN means either the Riverside county portion of the Salton Sea Air Basin (SSAB) or the South Coast Air Basin (SOCAB). The boundaries of each air basin shall be as defined by California Code of Regulations, Section 60104, Title 17.

(4) CLEAN AIR ACT NON-ATTAINMENT FEE means the fee that would have been assessed to a major stationary source pursuant to Section 185 of

the 1990 amendments to the Clean Air Act (CAA). The annual VOC (CAA) Non-Attainment Fee (pursuant to Section 185) for a major stationary source of VOC and the Annual NOx CAA Non-Attainment Fee for, a major stationary source of NOx (a source may be a major stationary source for either VOC, NOx or both and subject to the applicable fee) for excess emissions of these air contaminants in accordance with Section 185 (b) of the CAA shall be calculated as follows:

Annual CAA Non-Attainment Fee = $5,000 x CPIF x [A – (0.8 x B)]

Where:

A is the total amount of emissions actually emitted during the applicable fee assessment year for pollutants included in B, in tons. If A is less than or equal to 80% of B; then there shall be no annual CAA non-attainment fee assessed for the subject year.

B is Baseline Emissions, of VOC, NOx or both for which a source qualifies as a major stationary source as defined in this rule, in tons.

CPIF is the annual Consumer Price Index (CPI) adjustment factor as defined in this rule.

(5) CPIF means the annual consumer price index (CPI) adjustment factor which is equivalent to the cumulative increase in the CPI beginning with the 1989 change in the index up to and including the change in the year prior to the year for which the fees are due. For any calendar year the CPI is the average of the CPI for all-urban consumers published by the Department of Labor, as of the close of the 12-month period ending on August 31 of each calendar year or the revision of the CPI which is most consistent with the CPI for calendar year 1989 in accordance with Sections 502(b)(3)(B)(v) and 185(b)(3) of the CAA. Section 185 cross-references the methodology in section 502(b)(3)(B)(v) of the CAA. This method has been interpreted for use in determining permit fees in a 1992 EPA memorandum. (See, Memorandum of October 15, 1992, from Frank Bunyard, "Calculating Fees for Operating Permits.") EPA has used this method to calculate the Part 70 permit fee rate since 1990, and will continue to update the rate every year in September, when the August values are available. The adjusted section 185 fee, then, would be prorated to that adjusted permit fee by multiplying the Part 70 permit fee rate by

200 ($5000/$25). Since Section 185 fees are assessed on a calendar year basis, and the inflation factor is applied in September the calendar year fee is determined as a weighted average (8/12 of the fee associated with January to August, and 4/12 of the fee associated with September to December).

(6) FEE ASSESSMENT YEAR means the year for which CAA fees are being calculated and assessed under the provisions of this rule.

(7) MAJOR STATIONARY SOURCE shall, for the purposes of this rule:

(A) For a non-RECLAIM source-have the same meaning as in Sections 181(b)(4)(B) and 182(d) of the CAA, or 182 (e) as applicable, or a Major Polluting Facility as defined in Rule 1302(s) – Definition of Terms.

(B) For a RECLAIM source-have the same meaning as in paragraph (b)(2) of Rule 3001 – Applicability where the potential to emit for a RECLAIM facility is the higher of:

(i) the starting allocation plus non-tradeable credits; or

(ii) RECLAIM Trading Credits (RTCs) held in the allocation account after trading.

RTC's held in the certificate account are not part of the allocation.

(8) NITROGEN OXIDES (NOx) means any compound that is an oxide of nitrogen.

(9) RECLAIM is the Regional Clean Air Incentives Market established by Regulation XX – Regional Clean Air Incentives Market (RECLAIM) which for the purposes of this rule comprises:

(A) Existing RECLAIM sources with a District issued facility identification number during or prior to the attainment date; or

(B) New RECLAIM sources with a District issued facility identification number issued after the attainment year; or

(C) An existing source with a District issued facility identification number prior to the attainment date that becomes a RECLAIM source during the attainment year which shall be treated as an existing RECLAIM source for the purposes of determining

baseline emissions for the attainment year or the initial year of operation as applicable.

(10) VOLATILE ORGANIC COMPOUND (VOC) is as defined in Rule 102 – Definitions.

(c) Requirements

(1) Section 172 (e) Fee Equivalency Account

(A) The Executive Officer shall establish and maintain a Section 172(e) fee equivalency account. The equivalency account shall be credited with expenditures from qualified programs that satisfy the following criteria:

(i) surplus to the State Implementation Program for the federal 1-hour ozone standard and are approved by the AQMD executive officer, Executive Officer of CARB, and the Administrator or Regional Administrator of US EPA Region IX as being surplus to the SIP;

(ii) designed to result in direct VOC or NOx reductions in the SCAQMD; or facilitate future VOC or NOx reductions in the SCAQMD through vehicle/engine fueling infrastructure or advanced technology development efforts for implementation within the next 10 years, or other uses approved by EPA;

(iii) expenditures occurring only in calendar years subsequent to 2008 from eligible projects;

(iv) only monies actually expended from qualified programs during a calendar year shall be credited.

(B) Expenditures eligible for the Section 172 (e) fee equivalency account need not actually be held nor disbursed directly by the AQMD provided the underlying programs have been approved by CARB and EPA and tracked pursuant to subdivision (c).

(C) Funds shall be accounted for on a dollar for dollar basis and shall not be discounted due to the passage of time. Funds may be

accumulated in the accounts from year to year if a surplus exists in any given year, and used to offset the calculated Clean Air Act Non-attainment (Section 185) fees as needed.

(D) The Section 172 (e) fee equivalency account may be pre-funded according to the projects listed in Attachment A.

(2) Calculation of the CAA Non-Attainment (Section 185) Fee Obligation

By August 1, 2012, and continuing annually thereafter, the Executive Officer shall calculate the applicable prior calendar year CAA Non-Attainment (Section 185) fees for each major source in the South Coast AQMD pursuant to paragraph (b) and then aggregate such fees for the entire universe of major stationary sources in the District that would otherwise be subject to Section 185.

(3) Annual Demonstration of Equivalency

Beginning August 1, 2012, and continuing annually thereafter, the Executive Officer shall complete an equivalency demonstration to show that adequate funding was available in the equivalency account for the prior calendar year to meet the CAA Non-Attainment (Section 185) fee obligation calculated pursuant to paragraph (c)(2). Any surplus funding available in the fee equivalency account will be carried forward to the following assessment year. The annual determination of equivalency shall be made according to the following equation:

$$B_{i-1} + D_{i-1} - F_{i-1} = B_i > 0$$

Where,

B_{i-1} is the Section 172 (e) fee equivalency account balance at the beginning of the prior calendar year i-1

D_{i-1} is the funds deposited (credited) into the Section 172 (e) fee equivalency account during the prior calendar year (i-1)

F_{i-1} is the Section 185 fees calculated for all major stationary sources for prior calendar year calculated pursuant to paragraph (c) (2), and

B_i is the Section 172 (e) fee equivalency account balance at the end of calendar year i-1, which is carried forward as the beginning balance for the following year i.

(4) Annual Preliminary Determination of Equivalency

Beginning July 1, 2012, and continuing annually thereafter, the Executive Officer shall complete a preliminary determination of equivalency to determine whether adequate funding is expected to be available in the Section 172 (e) fee equivalency account to meet the CAA Non-Attainment (Section 185) fee obligation for the current calendar year according to the following equation:

$$B_i + D_i > 110\% \times F_{i-1}$$

Where,

B_i is the Section 172 (e) Fee Equivalency Account balance at the beginning of the current calendar year i

D_i is the funds expected to be deposited (credited) into Section 172 (e) Fee Equivalency Account in current calendar year i, and

F_{i-1} is the Section 185 fees calculated pursuant to paragraph (c) (2) for the prior calendar year (i-1) being used as surrogate Section 185 fee estimate for the current year.

(5) Reporting Requirements

Beginning no later than September 3, 2012, and continuing annually thereafter, the EO shall file a report with CARB and US EPA that includes all of the following:

(A) A listing of all facilities subject to Section 185 and their calculated prior calendar year fee obligation,

(B) The aggregate amount of prior calendar year CAA Non-Attainment (Section 185) fees obligation calculated pursuant to paragraph (c)(2),

(C) The Section 172 (e) fee equivalency account beginning balance,

(D) The amount of any surplus funding carried over to the subsequent calendar year,

(E) A listing of all programs, program descriptions, description of funding, certification of eligibility for each program, and associated expenditures that were credited into the Section 172 (e) fee equivalency account during the prior calendar year and those expected to be credited during the current year,

(F) The results of the equivalency demonstration and preliminary determination of equivalency conducted pursuant to paragraph (c)(3) and (c)(4).

(6) Backstop Provision for Failure to Achieve Equivalency

In the event the annual determination of equivalency conducted for the prior year pursuant to paragraph (c)(3) shows a deficit ($B_i < 0$) or the preliminary determination of equivalency conducted for the current year pursuant to paragraph (c)(4) shows that adequate funding to meet the estimated Section 185 fees for the current year may not be available, then the EO shall within 90 days submit to the Governing Board a back-stop rule for adoption that would require the Executive Officer to collect and/or track adequate fees for any shortfall. The Governing Board shall act on a backstop rule no later than 120 days from the funding inadequacy finding.

The backstop rule, to the extent applicable to major stationary sources of VOC and/or NOx, shall include the following baseline elements which owners or operators may request in writing:

(A) Alternative Baseline Period

Emissions from an alternative baseline period reflecting the average of two consecutive years within the last ten (10) years prior to and including the attainment year may be substituted for baseline emissions from the attainment year subject to the following analysis:

(i) Annual emission data for the ten (10) years preceding and including the attainment year; and

(ii) Analysis of adopted local, state, and federal rules or regulations that would have restricted the source's ability to either operate or emit a particular pollutant, had they been in effect during the consecutive two (2) years selected; and/or;

(iii) Adjusted annual emissions considering the impact of subparagraphs (ii) above; and

(iv) Certification, in writing, by the highest-ranking executive on site that the source's emissions are irregular, cyclical, or otherwise vary significantly from year to year.

(B) Multi-Site Aggregation

Major stationary sources within a single non-attainment region, under common ownership and control, and that comport with the Federal definition of major stationary source for multi-site aggregation, may aggregate multi-site baseline and future year emissions.

(C) Regulation III – Fees credit

Each major stationary source paying Clean Air Act Non-attainment Section 185 fees pursuant to the backstop rule adopted pursuant to paragraph (c) (6) shall receive a credit for their fees paid for annual operating fees and annual operating emissions fees during the preceding calendar year. In no case, shall the credit exceed the Clean Air Act Non-attainment Section 185 fees due, or exceed the otherwise applicable annual operating fees and annual operating emissions fees.

(d) Severability

If any provision of this rule is held by a USEPA or CARB~~,~~ finding or decision or a court decision to be invalid, such finding or decision will not affect the validity of the remainder of this rule and major stationary sources shall be subject to and must comply with the provisions contained in the reminder of this rule.

(e) Termination

This rule shall become inoperative and have no further effect or further operation upon a determination by the Administrator or Regional Administrator of the US EPA that in a given year the air basin is in attainment with the federal one-hour ozone standard, or upon approval by EPA of a replacement program, such as a state-wide program adopted by CARB.

(f) The Executive Officer shall submit Rule 317 for inclusion into the SIP by CARB and U.S. EPA within 14 days of adoption.

ATTACHMENT A – LIST OF PROGRAMS PRE- FUNDING SECTION 172 (e) FEE EQUIVALENCY ACCOUNT*

Name	Date of Award	Initial Year of Expenditure	One-time/ Ongoing*	Expenditure
U.S. EPA DERA				
School Bus Retrofit	6/5/2009	2010	One-time	$870,000
School Bus Replacement	6/30/2010	2011	One-time	$1,065,465
U.S. EPA DERA Earmark				
LNG Truck Replacement	5/2/2008	2009/2010	One-time	$5,000,000
LNG Truck Replacement	11/6/2009	2010/2011	One-time	$7,500,000
Crane, Shore Power, Off Road	4/21/2010	2011/2012	One-time	$5,000,000
U.S. EPA Emerging Technologies				
Truck Retrofits/SCRT	4/28/2009	2010	One-time	$900,000
Truck Retrofits-SCRT (ARRA)	8/31/2009	2011	One-time	$2,000,000
Truck Retrofits-SCCRT (ARRA)	8/31/2009	2011	One-time	$2,000,000
U.S. DOE Clean Cities				
ARRA-LNG Truck Replacement	11/6/2009	2010	One-time	$7,900,000
New LNG Station Ontario, CA	3/12/2010	2010/2011	One-time	$150,000
UPS Ontario-Las Vegas LNG…. (ARRA)	12/18/2009	2010/2011	One-time	$5,591,611
AB2766				

Name	Date of Award	Initial Year of Expenditure	One-time/ Ongoing*	Expenditure
*Local Governments***		FY 2008/2009	Continuous	$14,000,000
*MSRC***		2009 – 2010 (2 yrs.)	Continuous	$24,000,000
ARB AB118 Program				
Hybrid Truck and Bus Voucher Incentive Project (HVIP)		2010	One-time	$9,200,000
Clean Vehicle Rebate Program (CVRP)		2010	One-time	$117,000
Lawn Mower		2010	One-time	$816,000
California Energy Commission Funding				
LNG Truck Replacement	7/9/2010	2011	One-time	$5,142,000
NG Infrastructure: South Coast Air Basin	5/17/2010	2011	One-time	$2,900,000
SCAQMD Clean Fuels Program		2009 – 2010 (2 yrs.)	Continuous	$16,000,000
			Grand Total	**$110,152,076**

*: Pending CARB and USEPA approval

**: Based reported expenditures by local governments and MSRC that were spent in VOC/NOx emission reduction related projects.

(Funding sources marked “continuous” indicate expected annual funding unless indicated otherwise.

(Adopted February 4. 1977)(Amended February 1, 1980)
(Amended April 1, 1977)(Amended July 11, 1980)
(Amended August 4, l978)(Amended October 15, 1982)
(Amended September 7, 1979)(Amended March 2,1994)

Rule 401. **VISIBLE EMISSIONS**

(a) A person shall -not discharge into the atmosphere from any single source of emission whatsoever any air contaminant for a period or periods aggregating more than three minutes in any one hour which is:

(1) As dark or darker in shade as that designated No. I on the Ringelmann Chart, as published by the United States Bureau of Mines, or

(2) Of such Opacity as to obscure an observer's view to a degree equal to or greater than does smoke described in subsection (a)(1) of this rule.

(b) Notwithstanding the provisions of subsection (a) of this rule, a person shall not discharge into the atmosphere from equipment for melting, heating, or holding asphalt or coal tar pitch for on-site roof construction or repair; or from diesel pile driving hammers; any air contaminant for a period or periods aggregating more than three minutes in any one hour which is:

(1) As dark or darker in shade as that designated No. 2 on the Ringelmann Chart, as published by the United States Bureau of Mines, or

(2) Of such an opacity as to obscure an observer's view to a degree equal to or greater than does smoke described in subsection (b)(1) of this rule.

(c) This rule shall not apply to asphalt pavement heaters.

(d) This rule shall not apply to abrasive blasting operations.

(Adopted January 15, 1993)(Amended June 16, 2000)(Amended April 2, 2004)

RULE 403.1. SUPPLEMENTAL FUGITIVE DUST CONTROL REQUIREMENTS FOR COACHELLA VALLEY SOURCES

(a) Purpose

The purpose of this rule is to reduce or prevent the amount of fine particulate matter (PM_{10}) entrained in the ambient air from anthropogenic (man-made) fugitive dust sources.

(b) Applicability

The provisions of this rule are supplemental to Rule 403 requirements and shall apply only to fugitive dust sources in the Coachella Valley.

(c) Definitions

(1) ACTIVE OPERATIONS shall mean any source capable of generating fugitive dust, including, but not limited to, earth-moving activities, construction/demolition activities, disturbed surface areas, or agricultural operations.

(2) AGRICULTURAL OPERATIONS means 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.

(3) ANEMOMETERS are devices used to measure wind speed in accordance with the performance standards, maintenance and calibration criteria specified in the Rule 403.1 Implementation Handbook.

(4) BULK MATERIAL is sand, gravel, soil, aggregate material less than two inches in length or diameter and other organic and inorganic particulate matter.

(5) CHEMICAL STABILIZERS are 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 U.S. Environmental Protection Agency (U.S. EPA), or any applicable law, rule or regulation. The chemical stabilizers shall 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.

(6) COACHELLA VALLEY means that portion of Riverside County, as defined in Rule 103, subdivision (h).

(7) COACHELLA VALLEY BLOWSAND ZONE means the corridor of land extending two miles to either side of the centerline of the I-10 Freeway beginning at the SR-111/I-10 junction and continuing southeast to the I-10/ Jefferson Street interchange in Indio.

(8) CONSTRUCTION/DEMOLITION ACTIVITIES means any on-site mechanical activities conducted in preparation of 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.

(9) DISTURBED SURFACE AREA means 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 vegetative ground cover and soil characteristics are similar to adjacent or near-by natural conditions;

(B) been paved or otherwise covered by a permanent structure;

(C) sustained a vegetative ground cover of at least 70 percent of the average native cover for a particular area for at least 30 days.

(10) DUST CONTROL SUPERVISOR means a person with the authority to expeditiously employ sufficient dust mitigation measures to ensure compliance with all Rule 403 and Rule 403.1 requirements at an active operation.

(11) DUST SUPPRESSANTS are water, hygroscopic materials, or non-toxic chemical stabilizers used as a treatment material to reduce fugitive emissions.

(12) EARTH-MOVING ACTIVITIES means 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: such operations as grading, 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, soil mulching and agricultural tilling.

(13) 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 any person.

(14) FUGITIVE DUST CONTROL PLAN means a plan to control fugitive dust plan as described in subdivision (e).

(15) ON-SITE means within the property lines of a property, or as otherwise approved by the Executive Officer.

(16) OPEN STORAGE PILE is any accumulation of bulk material 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.

(17) PARTICULATE MATTER means any material, except uncombined water, which exists in a finely divided form as a liquid or solid at standard conditions.

(18) PM_{10} means particulate matter with an aerodynamic diameter smaller than or equal to 10 microns as measured by the applicable state and federal reference test methods.

(19) PROPERTY LINE means the boundaries of an area in which 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.

(20) RULE 403.1 IMPLEMENTATION HANDBOOK means a guidance document that has been approved by the Governing Board on April 2, 2004 or hereafter approved by the Executive Officer and the U.S. EPA.

(21) STABILIZED SURFACE means any previously disturbed surface area 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. Stabilization can be demonstrated by one or more of the applicable test methods contained in the Rule 403.1 Implementation Handbook.

(22) UNPAVED ROADS means any unsealed or unpaved roads, equipment paths, or travel ways that are not covered by one of the following: concrete, asphaltic concrete, recycled asphalt, asphalt or other materials with equivalent performance as determined by the Executive Officer, the California Air Resources Board, and the U.S. EPA. Public unpaved roads

are any unpaved roadway owned by federal, state, county, municipal or other governmental or quasi-governmental agencies. Private unpaved roads are all other unpaved roadways not defined as public.

(23) WIND-DRIVEN FUGITIVE DUST means visible emissions from any disturbed surface area which is generated by wind action alone.

(24) WIND GUST is the maximum instantaneous wind speed as measured by an anemometer.

(d) General Requirements

(1) Any person who is responsible for any active operation, open storage pile, or disturbed surface area, and who seeks an exemption pursuant to Rule 403, paragraph (g)(2) shall be required to determine when wind speed conditions exceed 25 miles per hour. The wind speed determination shall be based on either District forecasts or through use of an on-site anemometer as described in subdivision (g).

(2) Any person involved in active operations in the Coachella Valley Blowsand Zone shall stabilize new man-made deposits of bulk material within 24 hours of making such bulk material deposits. Stabilization procedures shall include one or more of the following:

(A) Application of water to at least 70 percent of the surface area of any bulk material deposits at least 3 times for each day that there is evidence of wind driven fugitive dust; or

(B) Application of chemical stabilizers in sufficient concentration so as to maintain a stabilized surface for a period of at least 6 months; or

(C) 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.

(3) Any person involved in active operations in the Coachella Valley Blowsand Zone shall stabilize new deposits of bulk material originating from off-site undisturbed natural desert areas within 72 hours. Stabilization procedures shall include one or more of the following:

(A) Application of water to at least 70 percent of the surface area of any bulk material deposits at least 3 times for each day that there is evidence of wind driven fugitive dust; or

(B) Application of chemical stabilizers in sufficient concentration so as to maintain a stabilized surface for a period of at least six months.

(4) A person who conducts or authorizes the conducting of an active operation shall implement at least one of the control actions specified in Rule 403, Table 2 for the source category "Inactive Disturbed Surface Areas" to minimize wind driven fugitive dust from disturbed surface areas at such time when active operations have ceased for a period of at least 20 days.

(5) Any person involved in agricultural tilling or soil mulching activities shall cease such activities when wind speeds exceed 25 miles per hour. The wind speed determination shall be based on either District forecasts or through use of an on-site anemometer as described in subdivision (g).

(e) Fugitive Dust Control Plan and Other Requirements for Construction Projects/Earth-Moving Activities

(1) Any person who conducts or authorizes the conducting of an active operation with a disturbed surface area of more than 5,000 square feet shall not initiate any earth-moving activities unless a fugitive dust control plan is prepared and approved by the Executive Officer in accordance with the requirements of subdivision (f) and the Rule 403.1 Implementation Handbook. These provisions shall not apply to active operations exempted by paragraph (i)(4).

(2) Any operator required to submit a fugitive dust control plan under paragraph (e)(1) shall maintain a complete copy of the approved fugitive dust control plan on site in a conspicuous place at all times and the fugitive dust control plan must be provided upon request.

(3) Any operator required to submit a fugitive dust control plan under paragraph (e)(1) shall install and maintain signage with project contact information that meets the minimum standards of the Rule 403.1 Implementation Handbook prior to initiating any type of earth-moving activities.

(4) Any operator required to submit a fugitive dust control plan under paragraph (e)(1) for a project with a disturbed surface area of 50 or more acres shall have an Dust Control Supervisor that:

(A) is employed by or contracted with the property owner or developer; and

(B) is on-site or is available to be on-site within 30 minutes of initial contact; and

(C) has the authority to expeditiously employ sufficient dust mitigation measures to ensure compliance with all Rule 403 and 403.1 requirements; and

(D) has completed the AQMD Coachella Valley Fugitive Dust Control Class and has been issued a valid Certificate of Completion for the class.

(5) Failure to comply with any of the provisions of an approved fugitive dust control plan shall be a violation of this rule.

(f) Fugitive Dust Control Plan Preparation, Submittal, and Approval Requirements

(1) A fugitive dust control plan prepared pursuant to paragraph (e)(1) must include the following information in a 8 ½ by 11 inch format:

(A) the name(s), address(es), and phone number(s) of the person(s) responsible for the preparation, submittal, and implementation of the fugitive dust control plan; and

(B) a description of the operation(s), including a map depicting the location of the site; and

(C) a listing of all sources of fugitive dust emissions within the property lines; and

(D) a description of the control measures as identified by the Rule 403.1 Implementation Handbook as applied to each of the sources identified in the fugitive dust control plan. The description of the control measures must be sufficiently detailed to demonstrate that the applicable best available control measures will be utilized and/or installed during all periods of active operations; and

(E) a description of the required contingency control measures (e.g., increased watering) for immediate implementation upon notice of visible dust crossing any property line.

(2) In the event that there are special technical (e.g., non-economic) circumstances, including safety, which prevent the use of at least one of the control measures as identified by the Rule 403.1 Implementation Handbook for any of the sources identified in the fugitive dust control plan, a justification statement must be provided in lieu of the description. The justification statement must explain the reason(s) why the required control measures cannot be implemented.

(3) Within 30 calendar days of the receipt of a fugitive dust control plan submitted pursuant to paragraph (e)(1), the Executive Officer will either

approve or apply any necessary conditions to the fugitive dust control plan in writing. For a fugitive dust control plan to be approved, the requirements of paragraph (f)(1) must be satisfied.

(4) The Executive Officer will apply conditions if the stated fugitive dust control plan measures do not satisfactorily conform to the best available control measures and guidance contained in the Rule 403.1 Implementation Handbook. The conditions necessary to modify the fugitive dust control plan will be provided in writing to the person(s) identified in subparagraph (f)(1)(A). A letter to the Executive Officer stating that such modifications will be incorporated into the fugitive dust control plan shall be deemed sufficient to result in approval of the fugitive dust control plan.

(5) Any fugitive dust control plan approved by the Executive Officer shall be valid for a period of one year from the date of approval. Any approved fugitive dust control plan must be resubmitted annually, at least 30 days prior to the expiration date, or the fugitive dust control plan shall expire 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 fugitive dust control plan, the submittal may contain a simple statement of no-change (Form 403NC). Otherwise, a resubmittal must contain all the items specified in subparagraphs (f)(1)(A) through (f)(1)(E).

(g) Wind Monitoring Implementation Requirements

(1) The determination of wind speed conditions in excess of 25 miles per hour, as specified in paragraphs (d)(1) and (d)(5), shall be based on the following criteria:

(A) For facilities with an on-site anemometer:

(i) When the on-site anemometer registers at least two wind gusts in excess of 25 miles per hour within a consecutive 30-minute period. Wind speeds shall be deemed to be below 25 miles per hour if there is no recurring wind gust in excess of 25 miles per hour within a consecutive 30-minute period; or

(B) For facilities without an on-site anemometer:

(i) When wind speeds in excess of 25 miles per hour are forecast to occur in the Coachella Valley for that day. This condition shall apply to the full calendar day for which the forecast is valid. (The Executive Officer shall determine meteorological conditions which will cause wind speeds in excess of 25 miles per hour, and shall issue daily forecasts of expected wind conditions. Such forecasts shall be available to the public); or

(ii) When wind speeds in excess of 25 miles per hour are not forecast to occur by the District, and fugitive dust emissions are visible for a distance of at least 100 feet from the origin of such emissions, and there is visible evidence of wind driven fugitive dust.

(2) Any person who elects to install an on-site anemometer shall:

(A) Notify the Executive Officer no more than 10 days after installing such equipment. The notification shall contain, at a minimum, the person's name, address, telephone number, description of the operation(s), and first day of operation, as specified in the District's Rule 403.1 Implementation Handbook.

(B) Be subject to the provisions of subparagraph (g)(1)(B) for wind speed determinations if equipment outages, malfunctions, or invalid data exceed one hour during active operations on a calendar day.

(h) Recordkeeping

(1) A person subject to the provisions of this rule shall compile written daily records to document the specific actions taken to comply with this Rule. Such records shall be retained for not less than three years and shall be made available to the Executive Officer upon request.

(2) In addition to the provisions of paragraph (h)(1), any person who elects to install an on-site anemometer shall also compile written records. Such records shall contain:

(A) Location, vendor, model, and serial number of the anemometer;

(B) The time of occurrence of any wind gust in excess of 25 miles per hour during hours of active operations;

(C) The actions taken to comply with the provisions of paragraphs (d)(5) and (i)(3), as applicable.

(i) Exemptions

(1) The provisions of this rule shall not apply to ceased or inactive mining operations subject to the requirements of the Surface Mining and Recovery Act (SMARA) of 1975, provided that the provisions of the SMARA Reclamation Plan are implemented by the owner and are at least as stringent as those contained in this rule;

(2) The provisions of paragraphs (d)(2), (d)(3), and (d)(4) shall not apply to:

(A) Any active operation, open storage pile, or disturbed surface area for which necessary fugitive dust preventive or mitigative actions are in conflict with the Endangered Species Act as determined in writing by the State or federal agency responsible for making such determinations;

(B) Any disturbed surface areas or bulk material deposits with a surface area less than 2,500 square feet;

(C) Non-routine or emergency maintenance of flood control channels and water spreading basins.

(3) The provisions of paragraph (d)(5) shall not apply to agricultural tilling activities or soil mulching activities under the following conditions:

(A) If the prohibitory requirements of this Rule have occurred during six or more hours of active operations on each of two previous consecutive days, then a one-day exemption will be allowed. (These activities would again be subject to the prohibitory requirements of this Rule following this one day exemption.)

(B) If the prohibitory requirements of this Rule have occurred during sixty or more cumulative hours of active operations within a calendar month, then an exemption will be allowed for the remainder of the calendar month. (These activities would again be subject to the prohibitory requirements of this Rule at the start of the following month.)

(C) During periods of precipitation.

(4) The provisions of paragraph (e)(1) shall not apply to any active operation which is required to submit a dust control plan to any city or county government that has adopted a District-approved dust control ordinance.

(j) Fees

(1) Any person subject to a fugitive dust control plan submittal pursuant to paragraph (e)(1) shall be assessed applicable filing and evaluation fees pursuant to Rule 306.

(2) The submittal of an annual statement of no-change, pursuant to paragraph (f)(5), shall not be considered as an annual review, and therefore shall not be subject to annual review fees, pursuant to Rule 306.

(Adopted May 7, 1976) (Amended November 6, 1992)
(Amended July 9, 1993) (Amended February 14, 1997)
(Amended December 11, 1998)(Amended April 2, 2004)
(Amended June 3, 2005)

RULE 403. FUGITIVE DUST

(a) Purpose

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.

(b) Applicability

The provisions of this Rule shall apply to any activity or man-made condition capable of generating fugitive dust.

(c) Definitions

(1) ACTIVE OPERATIONS means any source capable of generating fugitive dust, including, but not limited to, earth-moving activities, construction/demolition activities, disturbed surface area, or heavy- and light-duty vehicular movement.

(2) AGGREGATE-RELATED PLANTS are defined as facilities that produce and / or mix sand and gravel and crushed stone.

(3) AGRICULTURAL HANDBOOK means the region-specific guidance document that has been approved by the Governing Board or hereafter approved by the Executive Officer and the U.S. EPA. For the South Coast Air Basin, the Board-approved region-specific guidance document is the Rule 403 Agricultural Handbook dated December 1998. For the Coachella Valley, the Board-approved region-specific guidance document is the Rule 403 Coachella Valley Agricultural Handbook dated April 2, 2004.

(4) ANEMOMETERS are devices used to measure wind speed and direction in accordance with the performance standards, and maintenance and calibration criteria as contained in the most recent Rule 403 Implementation Handbook.

(5) BEST AVAILABLE CONTROL MEASURES means fugitive dust control actions that are set forth in Table 1 of this Rule.

(6) BULK MATERIAL is sand, gravel, soil, aggregate material less than two inches in length or diameter, and other organic or inorganic particulate matter.

(7) CEMENT MANUFACTURING FACILITY is any facility that has a cement kiln at the facility.

(8) CHEMICAL STABILIZERS are 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 U.S. Environmental Protection Agency (U.S. EPA), or any applicable law, rule or regulation. The chemical stabilizers shall 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.

(9) COMMERCIAL POULTRY RANCH means any building, structure, enclosure, or premises where more than 100 fowl are kept or maintained for the primary purpose of producing eggs or meat for sale or other distribution.

(10) CONFINED ANIMAL FACILITY means a source or group of sources of air pollution at an agricultural source for the raising of 3,360 or more fowl or 50 or more animals, including but not limited to, any structure, building, installation, farm, corral, coop, feed storage area, milking parlor, or system for the collection, storage, or distribution of solid and liquid manure; if domesticated animals, including horses, sheep, goats, swine, beef cattle, rabbits, chickens, turkeys, or ducks are corralled, penned, or otherwise caused to remain in restricted areas for commercial agricultural purposes and feeding is by means other than grazing.

(11) CONSTRUCTION/DEMOLITION ACTIVITIES means any on-site mechanical activities conducted in preparation of, 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.

(12) CONTRACTOR means any person who has a contractual arrangement to conduct an active operation for another person.

(13) DAIRY FARM is an operation on a property, or set of properties that are contiguous or separated only by a public right-of-way, that raises cows or

produces milk from cows for the purpose of making a profit or for a livelihood. Heifer and calf farms are dairy farms.

(14) DISTURBED SURFACE AREA means 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 of at least 70 percent of the native cover for a particular area for at least 30 days.

(15) DUST SUPPRESSANTS are water, hygroscopic materials, or non-toxic chemical stabilizers used as a treatment material to reduce fugitive dust emissions.

(16) EARTH-MOVING ACTIVITIES means 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.

(17) DUST CONTROL SUPERVISOR means a person with the authority to expeditiously employ sufficient dust mitigation measures to ensure compliance with all Rule 403 requirements at an active operation.

(18) 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 any person.

(19) HIGH WIND CONDITIONS means that instantaneous wind speeds exceed 25 miles per hour.

(20) INACTIVE DISTURBED SURFACE AREA means any disturbed surface area upon which active operations have not occurred or are not expected to occur for a period of 20 consecutive days.

(21) LARGE OPERATIONS means any active operations on property which contains 50 or more acres of disturbed surface area; or any earth-moving operation with a daily earth-moving or throughput volume of 3,850 cubic

meters (5,000 cubic yards) or more three times during the most recent 365-day period.

(22) OPEN STORAGE PILE is any accumulation of bulk material, 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.

(23) PARTICULATE MATTER means any material, except uncombined water, which exists in a finely divided form as a liquid or solid at standard conditions.

(24) PAVED ROAD means a public or private improved street, highway, alley, public way, or easement that is covered by typical roadway materials, but excluding access roadways that connect a facility with a public paved roadway 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.

(25) PM_{10} means particulate matter with an aerodynamic diameter smaller than or equal to 10 microns as measured by the applicable State and Federal reference test methods.

(26) PROPERTY LINE means 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.

(27) RULE 403 IMPLEMENTATION HANDBOOK means a guidance document that has been approved by the Governing Board on April 2, 2004 or hereafter approved by the Executive Officer and the U.S. EPA.

(28) SERVICE ROADS are paved or unpaved roads that are used by one or more public agencies for inspection or maintenance of infrastructure and which are not typically used for construction-related activity.

(29) SIMULTANEOUS SAMPLING means 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.

(30) SOUTH COAST AIR BASIN means the non-desert portions of Los Angeles, Riverside, and San Bernardino counties and all of Orange

County as defined in California Code of Regulations, Title 17, Section 60104. The area is bounded on the west by the Pacific Ocean, on the north and east by the San Gabriel, San Bernardino, and San Jacinto Mountains, and on the south by the San Diego county line.

(31) STABILIZED SURFACE means 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. Stabilization can be demonstrated by one or more of the applicable test methods contained in the Rule 403 Implementation Handbook.

(32) TRACK-OUT means 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.

(33) TYPICAL ROADWAY MATERIALS means concrete, asphaltic concrete, recycled asphalt, asphalt, or any other material of equivalent performance as determined by the Executive Officer, and the U.S. EPA.

(34) UNPAVED ROADS means any unsealed or unpaved roads, equipment paths, or travel ways that are not covered by typical roadway materials. Public unpaved roads are any unpaved roadway owned by federal, state, county, municipal or other governmental or quasi-governmental agencies. Private unpaved roads are all other unpaved roadways not defined as public.

(35) VISIBLE ROADWAY DUST means any sand, soil, dirt, or other solid particulate matter which is visible upon paved road surfaces and which can be removed by a vacuum sweeper or a broom sweeper under normal operating conditions.

(36) WIND-DRIVEN FUGITIVE DUST means visible emissions from any disturbed surface area which is generated by wind action alone.

(37) WIND GUST is the maximum instantaneous wind speed as measured by an anemometer.

(d) Requirements

(1) No person shall cause or allow the emissions of fugitive dust from any active operation, open storage pile, or disturbed surface area such that:

(A) the dust remains visible in the atmosphere beyond the property line of the emission source; or

(B) the dust emission exceeds 20 percent opacity (as determined by the appropriate test method included in the Rule 403 Implementation Handbook), if the dust emission is the result of movement of a motorized vehicle.

(2) No person shall conduct active operations without utilizing the applicable best available control measures included in Table 1 of this Rule to minimize fugitive dust emissions from each fugitive dust source type within the active operation.

(3) No person shall 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 U.S. EPA-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 U.S. EPA-published documents for U.S. EPA-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.

(4) No person shall 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.

(5) No person shall 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 (d)(5)(A) through (d)(5)(E) at each vehicle egress from the site to a paved public road.

(A) 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.

(B) Pave the surface extending at least 100 feet and at least 20 feet wide.

(C) Utilize a wheel shaker/wheel spreading device consisting of raised dividers (rails, pipe, or grates) at least 24 feet long and 10 feet wide to remove bulk material from tires and vehicle undercarriages before vehicles exit the site.

(D) Install and utilize a wheel washing system to remove bulk material from tires and vehicle undercarriages before vehicles exit the site.

(E) Any other control measures approved by the Executive Officer and the U.S. EPA as equivalent to the actions specified in subparagraphs (d)(5)(A) through (d)(5)(D).

(6) Beginning January 1, 2006, any person who operates or authorizes the operation of a confined animal facility subject to this Rule shall implement the applicable conservation management practices specified in Table 4 of this Rule.

(e) Additional Requirements for Large Operations

(1) Any person who conducts or authorizes the conducting of a large operation subject to this Rule shall implement the applicable actions specified in Table 2 of this Rule at all times and shall implement the applicable actions specified in Table 3 of this Rule when the applicable performance standards can not be met through use of Table 2 actions; and shall:

(A) submit a fully executed Large Operation Notification (Form 403 N) to the Executive Officer within 7 days of qualifying as a large operation;

(B) include, as part of the notification, the name(s), address(es), and phone number(s) of the person(s) responsible for the submittal, and a description of the operation(s), including a map depicting the location of the site;

(C) 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 Executive Officer upon request; -

(D) install and maintain project signage with project contact signage that meets the minimum standards of the Rule 403 Implementation Handbook, prior to initiating any earthmoving activities;

(E) identify a dust control supervisor that:

(i) is employed by or contracted with the property owner or developer;

(ii) is on the site or available on-site within 30 minutes during working hours;

(iii) has the authority to expeditiously employ sufficient dust mitigation measures to ensure compliance with all Rule requirements;

(iv) has completed the AQMD Fugitive Dust Control Class and has been issued a valid Certificate of Completion for the class; and

(F) notify the Executive Officer in writing within 30 days after the site no longer qualifies as a large operation as defined by paragraph (c)(18).

(2) Any Large Operation Notification submitted to the Executive Officer or AQMD-approved dust control plan shall be valid for a period of one year from the date of written acceptance by the Executive Officer. Any Large Operation Notification accepted pursuant to paragraph (e)(1), excluding those submitted by aggregate-related plants and cement manufacturing facilities must be resubmitted annually by the person who conducts or authorizes the conducting of a large operation, at least 30 days prior to the expiration date, or the submittal shall no longer be valid 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 accepted submittal or in an AQMD-approved dust control plan, the resubmittal may be a simple statement of no-change (Form 403NC).

(f) Compliance Schedule

The newly amended provisions of this Rule shall become effective upon adoption. Pursuant to subdivision (e), any existing site that qualifies as a large operation will have 60 days from the date of Rule adoption to comply with the notification and recordkeeping requirements for large operations. Any Large Operation

Notification or AQMD-approved dust control plan which has been accepted prior to the date of adoption of these amendments shall remain in effect and the Large Operation Notification or AQMD-approved dust control plan annual resubmittal date shall be one year from adoption of this Rule amendment.

(g) Exemptions

(1) The provisions of this Rule shall not apply to:

(A) Dairy farms.

(B) Confined animal facilities provided that the combined disturbed surface area within one continuous property line is one acre or less.

(C) Agricultural vegetative crop operations provided that the combined disturbed surface area within one continuous property line and not separated by a paved public road is 10 acres or less.

(D) Agricultural vegetative crop operations within the South Coast Air Basin, whose combined disturbed surface area includes more than 10 acres provided that the person responsible for such operations:

(i) voluntarily implements the conservation management practices contained in the Rule 403 Agricultural Handbook;

(ii) completes and maintains the self-monitoring form documenting sufficient conservation management practices, as described in the Rule 403 Agricultural Handbook; and

(iii) makes the completed self-monitoring form available to the Executive Officer upon request.

(E) Agricultural vegetative crop operations outside the South Coast Air Basin whose combined disturbed surface area includes more than 10 acres provided that the person responsible for such operations:

(i) voluntarily implements the conservation management practices contained in the Rule 403 Coachella Valley Agricultural Handbook; and

(ii) completes and maintains the self-monitoring form documenting sufficient conservation management practices, as described in the Rule 403 Coachella Valley Agricultural Handbook; and

(iii) makes the completed self-monitoring form available to the Executive Officer upon request.

(F) Active operations conducted during emergency life-threatening situations, or in conjunction with any officially declared disaster or state of emergency.

(G) Active operations conducted by essential service utilities to provide electricity, natural gas, telephone, water and sewer during periods of service outages and emergency disruptions.

(H) Any contractor subsequent to the time the contract ends, provided that such contractor implemented the required control measures during the contractual period.

(I) 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.

(J) 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 discing 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 clause (g)(1)(H)(i). The provisions this clause shall not exempt the owner of any property from stabilizing, in accordance with paragraph (d)(2), disturbed surface areas which have been created as a result of the weed abatement actions.

(K) sandblasting operations.

(2) The provisions of paragraphs (d)(1) and (d)(3) shall not apply:

(A) When wind gusts exceed 25 miles per hour, provided that:

(i) The required Table 3 contingency measures in this Rule are implemented for each applicable fugitive dust source type, and;

(ii) records are maintained in accordance with subparagraph (e)(1)(C).

(B) To unpaved roads, provided such roads:

(i) are used solely for the maintenance of wind-generating equipment; or

(ii) are unpaved public alleys as defined in Rule 1186; or

(iii) are service roads that 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, as determined in writing by the State or federal agency responsible for making such determinations.

(3) The provisions of (d)(2) shall not apply to any aggregate-related plant or cement manufacturing facility that implements the applicable actions specified in Table 2 of this Rule at all times and shall implement the applicable actions specified in Table 3 of this Rule when the applicable performance standards of paragraphs (d)(1) and (d)(3) can not be met through use of Table 2 actions.

(4) The provisions of paragraphs (d)(1), (d)(2), and (d)(3) shall not apply to:

(A) Blasting operations which have been permitted by the California Division of Industrial Safety; and

(B) Motion picture, television, and video production activities when dust emissions are required for visual effects. In order to obtain this exemption, the Executive Officer must receive notification in writing at least 72 hours in advance of any such activity and no nuisance results from such activity.

(5) The provisions of paragraph (d)(3) shall not apply if the dust control actions, as specified in Table 2, are implemented on a routine basis for

each applicable fugitive dust source type. To qualify for this exemption, a person must maintain records in accordance with subparagraph (e)(1)(C).

(6) The provisions of paragraph (d)(4) shall not apply to earth coverings of public paved roadways 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 provided that such roadway is closed to through traffic and visible roadway dust is removed within one day following the cessation of activities.

(7) The provisions of subdivision (e) 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.

(B) any large operation which is required to submit a dust control plan to any city or county government which has adopted a District-approved dust control ordinance.

(C) any large operation subject to Rule 1158, which has an approved dust control plan pursuant to Rule 1158, provided that all sources of fugitive dust are included in the Rule 1158 plan.

(8) The provisions of subparagraph (e)(1)(A) through (e)(1)(C) shall not apply to any large operation with an AQMD-approved fugitive dust control plan provided that there is no change to the sources and controls as identified in the AQMD-approved fugitive dust control plan.

(h) Fees

Any person conducting active operations for which the Executive Officer conducts upwind/downwind monitoring for PM_{10} pursuant to paragraph (d)(3) shall be assessed applicable Ambient Air Analysis Fees pursuant to Rule 304.1. Applicable fees shall be waived for any facility which is exempted from paragraph (d)(3) or meets the requirements of paragraph (d)(3).

TABLE 1
BEST AVAILABLE CONTROL MEASURES
(Applicable to All Construction Activity Sources)

Source Category	Control Measure	Guidance
Backfilling	01-1 Stabilize backfill material when not actively handling; and 01-2 Stabilize backfill material during handling; and 01-3 Stabilize soil at completion of activity.	✓ Mix backfill soil with water prior to moving ✓ Dedicate water truck or high capacity hose to backfilling equipment ✓ Empty loader bucket slowly so that no dust plumes are generated ✓ Minimize drop height from loader bucket
Clearing and grubbing	02-1 Maintain stability of soil through pre-watering of site prior to clearing and grubbing; and 02-2 Stabilize soil during clearing and grubbing activities; and 02-3 Stabilize soil immediately after clearing and grubbing activities.	✓ Maintain live perennial vegetation where possible ✓ Apply water in sufficient quantity to prevent generation of dust plumes
Clearing forms	03-1 Use water spray to clear forms; or 03-2 Use sweeping and water spray to clear forms; or 03-3 Use vacuum system to clear forms.	✓ Use of high pressure air to clear forms may cause exceedance of Rule requirements
Crushing	04-1 Stabilize surface soils prior to operation of support equipment; and 04-2 Stabilize material after crushing.	✓ Follow permit conditions for crushing equipment ✓ Pre-water material prior to loading into crusher ✓ Monitor crusher emissions opacity ✓ Apply water to crushed material to prevent dust plumes

TABLE 1
BEST AVAILABLE CONTROL MEASURES
(Applicable to All Construction Activity Sources)

Source Category	Control Measure	Guidance
Cut and fill	05-1 Pre-water soils prior to cut and fill activities; and 05-2 Stabilize soil during and after cut and fill activities.	✓ For large sites, pre-water with sprinklers or water trucks and allow time for penetration ✓ Use water trucks/pulls to water soils to depth of cut prior to subsequent cuts
Demolition – mechanical/manual	06-1 Stabilize wind erodible surfaces to reduce dust; and 06-2 Stabilize surface soil where support equipment and vehicles will operate; and 06-3 Stabilize loose soil and demolition debris; and 06-4 Comply with AQMD Rule 1403.	✓ Apply water in sufficient quantities to prevent the generation of visible dust plumes
Disturbed soil	07-1 Stabilize disturbed soil throughout the construction site; and 07-2 Stabilize disturbed soil between structures	✓ Limit vehicular traffic and disturbances on soils where possible ✓ If interior block walls are planned, install as early as possible ✓ Apply water or a stabilizing agent in sufficient quantities to prevent the generation of visible dust plumes
Earth-moving activities	08-1 Pre-apply water to depth of proposed cuts; and 08-2 Re-apply water as necessary to maintain soils in a damp condition and to ensure that visible emissions do not exceed 100 feet in any direction; and 08-3 Stabilize soils once earth-moving activities are complete.	✓ Grade each project phase separately, timed to coincide with construction phase ✓ Upwind fencing can prevent material movement on site ✓ Apply water or a stabilizing agent in sufficient quantities to prevent the generation of visible dust plumes

TABLE 1
BEST AVAILABLE CONTROL MEASURES
(Applicable to All Construction Activity Sources)

Source Category	Control Measure		Guidance
Importing/exporting of bulk materials	09-1	Stabilize material while loading to reduce fugitive dust emissions; and	✓ Use tarps or other suitable enclosures on haul trucks ✓ Check belly-dump truck seals regularly and remove any trapped rocks to prevent spillage ✓ Comply with track-out prevention/mitigation requirements ✓ Provide water while loading and unloading to reduce visible dust plumes
	09-2	Maintain at least six inches of freeboard on haul vehicles; and	
	09-3	Stabilize material while transporting to reduce fugitive dust emissions; and	
	09-4	Stabilize material while unloading to reduce fugitive dust emissions; and	
	09-5	Comply with Vehicle Code Section 23114.	
Landscaping	10-1	Stabilize soils, materials, slopes	✓ Apply water to materials to stabilize ✓ Maintain materials in a crusted condition ✓ Maintain effective cover over materials ✓ Stabilize sloping surfaces using soil binders until vegetation or ground cover can effectively stabilize the slopes ✓ Hydroseed prior to rain season
Road shoulder maintenance	11-1	Apply water to unpaved shoulders prior to clearing; and	✓ Installation of curbing and/or paving of road shoulders can reduce recurring maintenance costs ✓ Use of chemical dust suppressants can inhibit vegetation growth and reduce future road shoulder maintenance costs
	11-2	Apply chemical dust suppressants and/or washed gravel to maintain a stabilized surface after completing road shoulder maintenance.	

TABLE 1
BEST AVAILABLE CONTROL MEASURES
(Applicable to All Construction Activity Sources)

Source Category	**Control Measure**	
Screening	12-1 Pre-water material prior to screening; and 12-2 Limit fugitive dust emissions to opacity and plume length standards; and 12-3 Stabilize material immediately after screening.	✓ Dedicate water truck or high capacity hose to screening operation ✓ Drop material through the screen slowly and minimize drop height ✓ Install wind barrier with a porosity of no more than 50% upwind of screen to the height of the drop point
Staging areas	13-1 Stabilize staging areas during use; and 13-2 Stabilize staging area soils at project completion. **Guidance**	✓ Limit size of staging area ✓ Limit vehicle speeds to 15 miles per hour ✓ Limit number and size of staging area entrances/exists
Stockpiles/ Bulk Material Handling	14-1 Stabilize stockpiled materials. 14-2 Stockpiles within 100 yards of off-site occupied buildings must not be greater than eight feet in height; or must have a road bladed to the top to allow water truck access or must have an operational water irrigation system that is capable of complete stockpile coverage.	✓ Add or remove material from the downwind portion of the storage pile ✓ Maintain storage piles to avoid steep sides or faces

TABLE 1
BEST AVAILABLE CONTROL MEASURES
(Applicable to All Construction Activity Sources)

Source Category	Control Measure	
Traffic areas for construction activities	15-1 Stabilize all off-road traffic and parking areas; and 15-2 Stabilize all haul routes; and 15-3 Direct construction traffic over established haul routes.	✓ Apply gravel/paving to all haul routes as soon as possible to all future roadway areas ✓ Barriers can be used to ensure vehicles are only used on established parking areas/haul routes
Trenching	16-1 Stabilize surface soils where trencher or excavator and support equipment will operate; and 16-2 Stabilize soils at the completion of trenching activities. **Guidance**	✓ Pre-watering of soils prior to trenching is an effective preventive measure. For deep trenching activities, pre-trench to 18 inches soak soils via the pre-trench and resuming trenching ✓ Washing mud and soils from equipment at the conclusion of trenching activities can prevent crusting and drying of soil on equipment
Truck loading	17-1 Pre-water material prior to loading; and 17-2 Ensure that freeboard exceeds six inches (CVC 23114)	✓ Empty loader bucket such that no visible dust plumes are created ✓ Ensure that the loader bucket is close to the truck to minimize drop height while loading
Turf Overseeding	18-1 Apply sufficient water immediately prior to conducting turf vacuuming activities to meet opacity and plume length standards; and 18-2 Cover haul vehicles prior to exiting the site.	✓ Haul waste material immediately off-site

TABLE 1
BEST AVAILABLE CONTROL MEASURES
(Applicable to All Construction Activity Sources)

Source Category	Control Measure		Guidance
Unpaved roads/parking lots	19-1	Stabilize soils to meet the applicable performance standards; and	✓ Restricting vehicular access to established unpaved travel paths and parking lots can reduce stabilization requirements
	19-2	Limit vehicular travel to established unpaved roads (haul routes) and unpaved parking lots.	
Vacant land	20-1	In instances where vacant lots are 0.10 acre or larger and have a cumulative area of 500 square feet or more that are driven over and/or used by motor vehicles and/or off-road vehicles, prevent motor vehicle and/or off-road vehicle trespassing, parking and/or access by installing barriers, curbs, fences, gates, posts, signs, shrubs, trees or other effective control measures.	

Table 2
DUST CONTROL MEASURES FOR LARGE OPERATIONS

FUGITIVE DUST SOURCE CATEGORY	CONTROL ACTIONS	
Earth-moving (except construction cutting and filling areas, and mining operations)	(1a)	Maintain soil moisture content at a minimum of 12 percent, as determined by ASTM method D-2216, or other equivalent method approved by the Executive Officer, the California Air Resources Board, and the U.S. EPA. Two soil moisture evaluations must be conducted during the first three hours of active operations during a calendar day, and two such evaluations each subsequent four-hour period of active operations; OR
	(1a-1)	For any earth-moving which is more than 100 feet from all property lines, conduct watering as necessary to prevent visible dust emissions from exceeding 100 feet in length in any direction.
Earth-moving: Construction fill areas:	(1b)	Maintain soil moisture content at a minimum of 12 percent, as determined by ASTM method D-2216, or other equivalent method approved by the Executive Officer, the California Air Resources Board, and the U.S. EPA. For areas which have an optimum moisture content for compaction of less than 12 percent, as determined by ASTM Method 1557 or other equivalent method approved by the Executive Officer and the California Air Resources Board and the U.S. EPA, complete the compaction process as expeditiously as possible after achieving at least 70 percent of the optimum soil moisture content. Two soil moisture evaluations must be conducted during the first three hours of active operations during a calendar day, and two such evaluations during each subsequent four-hour period of active operations.

Table 2 (Continued)

FUGITIVE DUST SOURCE CATEGORY	CONTROL ACTIONS	
Earth-moving: Construction cut areas and mining operations:	(1c)	Conduct watering as necessary to prevent visible emissions from extending more than 100 feet beyond the active cut or mining area unless the area is inaccessible to watering vehicles due to slope conditions or other safety factors.
Disturbed surface areas (except completed grading areas)	(2a/b)	Apply dust suppression in sufficient quantity and frequency to maintain a stabilized surface. Any areas which cannot be stabilized, as evidenced by wind driven fugitive dust must have an application of water at least twice per day to at least 80 percent of the unstabilized area.
Disturbed surface areas: Completed grading areas	(2c)	Apply chemical stabilizers within five working days of grading completion; OR
	(2d)	Take actions (3a) or (3c) specified for inactive disturbed surface areas.
Inactive disturbed surface areas	(3a)	Apply water to at least 80 percent of all inactive disturbed surface areas on a daily basis when there is evidence of wind driven fugitive dust, excluding any areas which are inaccessible to watering vehicles due to excessive slope or other safety conditions; OR
	(3b)	Apply dust suppressants in sufficient quantity and frequency to maintain a stabilized surface; OR
	(3c)	Establish a vegetative ground cover within 21 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; OR
	(3d)	Utilize any combination of control actions (3a), (3b), and (3c) such that, in total, these actions apply to all inactive disturbed surface areas.

Table 2 (Continued)

FUGITIVE DUST SOURCE CATEGORY	CONTROL ACTIONS	
Unpaved Roads	(4a)	Water all roads used for any vehicular traffic at least once per every two hours of active operations [3 times per normal 8 hour work day]; OR
	(4b)	Water all roads used for any vehicular traffic once daily and restrict vehicle speeds to 15 miles per hour; OR
	(4c)	Apply a chemical stabilizer to all unpaved road surfaces in sufficient quantity and frequency to maintain a stabilized surface.
Open storage piles	(5a)	Apply chemical stabilizers; OR
	(5b)	Apply water to at least 80 percent of the surface area of all open storage piles on a daily basis when there is evidence of wind driven fugitive dust; OR
	(5c)	Install temporary coverings; OR
	(5d)	Install a three-sided enclosure with walls with no more than 50 percent porosity which extend, at a minimum, to the top of the pile. This option may only be used at aggregate-related plants or at cement manufacturing facilities.
All Categories	(6a)	Any other control measures approved by the Executive Officer and the U.S. EPA as equivalent to the methods specified in Table 2 may be used.

TABLE 3
CONTINGENCY CONTROL MEASURES FOR LARGE OPERATIONS

FUGITIVE DUST SOURCE CATEGORY	CONTROL MEASURES
Earth-moving	(1A) Cease all active operations; OR (2A) Apply water to soil not more than 15 minutes prior to moving such soil.
Disturbed surface areas	(0B) 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: 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; OR (1B) Apply chemical stabilizers prior to wind event; OR (2B) Apply water to all unstabilized disturbed areas 3 times per day. If there is any evidence of wind driven fugitive dust, watering frequency is increased to a minimum of four times per day; OR (3B) Take the actions specified in Table 2, Item (3c); OR (4B) Utilize any combination of control actions (1B), (2B), and (3B) such that, in total, these actions apply to all disturbed surface areas.
Unpaved roads	(1C) Apply chemical stabilizers prior to wind event; OR (2C) Apply water twice per hour during active operation; OR (3C) Stop all vehicular traffic.
Open storage piles	(1D) Apply water twice per hour; OR (2D) Install temporary coverings.
Paved road track-out	(1E) Cover all haul vehicles; OR (2E) Comply with the vehicle freeboard requirements of Section 23114 of the California Vehicle Code for both public and private roads.
All Categories	(1F) Any other control measures approved by the Executive Officer and the U.S. EPA as equivalent to the methods specified in Table 3 may be used.

Table 4
(Conservation Management Practices for Confined Animal Facilities)

SOURCE CATEGORY	CONSERVATION MANAGEMENT PRACTICES
Manure Handling **(Only applicable to Commercial Poultry Ranches)**	(1a) Cover manure prior to removing material off-site; AND (1b) Spread the manure before 11:00 AM and when wind conditions are less than 25 miles per hour; AND (1c) Utilize coning and drying manure management by removing manure at laying hen houses at least twice per year and maintain a base of no less than 6 inches of dry manure after clean out; or in lieu of complying with conservation management practice (1c), comply with conservation management practice (1d). (1d) Utilize frequent manure removal by removing the manure from laying hen houses at least every seven days and immediately thin bed dry the material.
Feedstock Handling	(2a) Utilize a sock or boot on the feed truck auger when filling feed storage bins.
Disturbed Surfaces	(3a) Maintain at least 70 percent vegetative cover on vacant portions of the facility; OR (3b) Utilize conservation tillage practices to manage the amount, orientation and distribution of crop and other plant residues on the soil surface year-round, while growing crops (if applicable) in narrow slots or tilled strips; OR (3c) Apply dust suppressants in sufficient concentrations and frequencies to maintain a stabilized surface.
Unpaved Roads	(4a) Restrict access to private unpaved roads either through signage or physical access restrictions and control vehicular speeds to no more than 15 miles per hour through worker notifications, signage, or any other necessary means; OR (4b) Cover frequently traveled unpaved roads with low silt content material (i.e., asphalt, concrete, recycled road base, or gravel to a minimum depth of four inches); OR (4c) Treat unpaved roads with water, mulch, chemical dust suppressants or other cover to maintain a stabilized surface.
Equipment Parking Areas	(5a) Apply dust suppressants in sufficient quantity and frequency to maintain a stabilized surface; OR (5b) Apply material with low silt content (i.e., asphalt, concrete, recycled road base, or gravel to a depth of four inches).

(Adopted May 7, 1976)(Amended October 5, 1979)
(Amended February 7, 1986)

RULE 404. PARTICULATE MATTER - CONCENTRATION

(a) A person shall not discharge into the atmosphere from any source, particulate matter in excess of the concentration at standard conditions, shown in Table 404(a).

Where the volume discharged is between figures listed in the Table, the exact concentration permitted to be discharged shall be determined by linear interpolation.

The provisions of this subsection shall not apply to any equipment completed and put into service before July 1, 1976 in the Palo Verde and Joshua Tree areas.

Before July 1, 1983, liquid sulfur compounds shall not be included as particulate matter discharged from petroleum coke calciners.

(b) A person shall not discharge into the atmosphere from any source, particulate matter in excess of 450 milligrams per cubic meter (0.196 grain per cubic foot) in discharged gas calculated as dry gas at standard conditions.

The provisions of this subsection shall apply only to any equipment completed and put into service before July 1, 1976 in the Palo Verde and Joshua Tree areas.

(c) The provisions of this rule shall not apply to emissions resulting from the combustion of liquid or gaseous fuels in steam generators or gas turbines.

(d) For the purposes of this rule, emissions shall be averaged over one complete cycle of operation or one hour, whichever is the lesser time period.

(e) The provisions of this rule shall not apply to the use of equipment which complies with the emission limits specified in Rule 1112.1.

TABLE 404(a)

Volume Discharged Calculated as Dry Gas At Standard Conditions		Maximum Concentration of Particulate Matter"Allowed in Discharged Gas Calculated as Dry Gas at Standard Conditions		Volume Discharged Calculated as Dry Gas At Standard Conditions		Maximum Concentration of Particulate Matter Allowed in Discharged Gas Calculated as Dry Gas at Standard Conditions	
Cubic meters Per Minute	Cubic feet Per Minute	Milligrams per Cubic Meter	Grains per Cubic Foot	Cubic meters Per Minute	Cubic feet Per Minute	Milligrams per Cubic Meter	Grains per Cubic Foot
25 or less	883 or less	450	0.196	900	31780	118	0.0515
30	1059	420	.183	1000	35310	113	.0493
35	1236	397	.173	1100	38850	109	.0476
40	1413	377	.165	1200	42380	106	.0463

45	1589	361	.158	1300	45910	102	.0445
50	1766	347	.152	1400	49440	100	.0437
60	2119	324	.141	1500	52970	97	.0424
70	2472	306	.134	1750	61800	92	.0402
80	2825	291	.127	2000	70630	87	.0380
90	3178	279	.122	2250	79460	83	.0362
100	3531	267	.117	2500	88290	80	.0349
125	4414	246	.107	3000	105900	75	.0327
150	5297	230	.100	4000	141300	67	.0293
175	6180	217	.0947	5000	176600	62	.0271
200	7063	206	.0900	6000	211900	58	.0253
250	8829	190	.0830	8000	282500	52	.0227
300	10590	177	.0773	10000	353100	48	.0210
350	12360	167	.0730	15000	529700	41	.0179
400	14130	159	.0694	20000	706300	37	.0162
450	15890	152	.0664	25000	882900	34	.0148
500	17660	146	.0637	30000	1059000	32	.0140
600	21190	137	.0598	40000	1413000	28	.0122
700	24720	129	.0563	50000	1766000	26	.0114
800	28250	123	.0537	70000 or more	2472000 or more	23	.0100

(Adopted May 7, 1976)(Amended February 7, 1986)

RULE 405. SOLID PARTICULATE MATTER - WEIGHT

(a) A person shall not discharge into the atmosphere from any source, solid particulate matter including lead and lead compounds in excess of the rate shown in Table 405(a).

Where the process weight per hour is between figures listed in the table, the exact weight of permitted discharge shall be determined by linear interpolation.

The provisions of this subsection shall not apply to any equipment completed and put into service before July 1, 1976 in the Palo Verde and Joshua Tree areas.

(b) A person shall not discharge into the atmosphere in any one hour from any source, solid particulate matter including lead and lead compounds in excess of 0.23 kilogram (0.5 pound) per 907 kilograms (2000 pounds) of process weight.

For the purposes of this subsection only, process air shall be considered to be a material introduced into the process when calculating process weight.

The provisions of this subsection shall apply only to equipment completed and put into service before July 1, 1976 in the Palo Verde and Joshua Tree areas.

(c) For the purposes of this rule, emissions shall be averaged over one complete cycle of operation or one hour, whichever is the lesser time period.

(d) The provisions of this rule shall not apply to the use of equipment which complies with the emission limits specified in Rule 1112.1.

TABLE 405(a)

Process Weight Per Hour		Maximum Discharge Rate Allowed for Solid Particulate Matter (Aggregate Discharged From All Points of Process		Process Weight Per Hour		Maximum Discharge Rate Allowed for Solid Particulate Matter (Aggregate Discharged From All points of Process	
Kilograms Per Hour	Pounds Per Hour	Kilograms Per Hour	Pounds Per Hour	Kilograms Per Hour	Pounds Per Hour	Kilograms Per Hour	Pounds Per Hour
100 or less	220 or less	0.450	0.99	9000	19840	5.308	11.7
150	331	0.585	1.29	10000	22050	5.440	12.0
200	441	0.703	1.55	12500	27560	5.732	12.6
250	551	0.804	1.77	15000	33070	5.982	13.2
300	661	0.897	1.98	17500	38580	6.202	13.7
350	772	0.983	2.17	20000	44090	6.399	14.1
400	882	1.063	2.34	25000	55120	6.743	14.9

450	992	1.138	2.51	30000	66140	7.037	15.5
500	1102	1.209	2.67	35000	77160	7.296	16.1
600	1323	1.340	2.95	40000	88180	7.527	16.6
700	1543	1.461	3.22	45000	99210	7.738	17.1
800	1764	1.573	3.47	50000	110200	7.931	17.5
900	1984	1.678	3.70	60000	132300	8.277	18.2
1000	2205	1.777	3.92	70000	154300	8.582	18.9
1250	2756	2.003	4.42	80000	176400	8.854	19.5
1500	3307	2.206	4.86	90000	198400	9.102	20.1
1750	3858	2.392	5.27	100000	220500	9.329	20.6
2000	4409	2.563	5.65	125000	275600	9.830	21.7
2250	4960	2.723	6.00	150000	330700	10.26	22.6
2500	5512	2.874	6.34	175000	385800	10.64	23.5
2750	6063	3.016	6.65	200000	440900	10.97	24.2
3000	6614	3.151	6.95	225000	496000	11.28	24.9
3250	7165	3.280	7.23	250000	551200	11.56	25.5
3600	7716	3.404	7.50	275000	606300	11.82	26.1
4000	8818	3.637	8.02	300000	661400	12.07	26.6
4500	9921	3.855	8.50	325000	716500	12.30	27.1
5000	11020	4.059	8.95	350000	771600	12.51	27.6
6000	13230	4.434	9.78	400000	881800	12.91	28.5
7000	15430	4.775	10.5	450000	992100	13.27	29.3
8000	17640	5.089	11.2	500000 or more	1102000 or more	13.60	30.0

(Adopted May 7, 1976)(Amended April 2, 1982)

RULE 407. LIQUID AND GASEOUS AIR CONTAMINANTS

(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 (SO_2) 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 limits of Rule 431.1.

(Adopted May 7, 1976)

RULE 408. CIRCUMVENTION

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.

(Adopted May 7, 1976)(Amended August 7, 1981)

RULE 409. COMBUSTION CONTAMINANTS

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 (CO_2) 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.

(Adopted November 4, 1977)(Amended September 1, 1978)

(Amended February 2, 1979)(Amended January 8, 1982)

(Amended May 6, 1983)(Amended May 4, 1990)

(Amended April 5, 1991)(September 11, 1992)

(October 2, 1992)(November 17, 1995)

(Amended June 12, 1998)

RULE 431.1. SULFUR CONTENT OF GASEOUS FUELS

(a) Purpose

The purpose of this rule is to reduce sulfur oxides (SO_x) emissions from the burning of gaseous fuels in stationary equipment requiring a permit to operate by the South Coast Air Quality Management District (District).

(b) Definitions

(1) BURN means to combust any gaseous fuel, whether for useful heat or by incineration without heat recovery, except for flaring of emergency vent gases.

(2) CONTINUOUS EMISSION MONITORING SYSTEM (CEMS) means a system of equipment that continuously measures and records all parameters necessary to directly determine concentrations or mass emissions of selected pollutants, and which meets all of the requirements of Attachment A, Section II.

(3) CONTINUOUS FUEL GAS MONITORING SYSTEM (CFGMS) means 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.

(4) CONTINUOUS MONITOR means a CEMS or CFGMS.

(5) DAILY AVERAGE means 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.

(6) EMERGENCY VENT GAS means any gas released from a process unit as a result of any process upset or breakdown.

(7) GASEOUS FUEL means 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.

(8) LANDFILL GAS means any gas derived through any biological process from the decomposition of organic waste buried within a waste disposal site.

(9) MONTHLY WEIGHTED AVERAGE SULFUR CONTENT means 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.

(10) NATURAL GAS means 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.

(11) RECLAIM SO_x FACILITY means a facility that has been included in the RECLAIM (Regional Clean Air Incentives Market) program in accordance with the requirements of Rule 2001 "Applicability," and/or which has been issued a RECLAIM Facility Permit and is subject to the requirements of Rule 2011, "Requirements for Monitoring, Reporting, and Recordkeeping for Oxides of Sulfur (SO_x) Emissions."

(12) REFINERY GAS means 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.

(13) SEWAGE DIGESTER GAS means any gas derived from anaerobic decomposition of organic sewage within its containment.

(14) SMALL REFINER means any person owning or operating a facility in California that produces materials from the processing of crude oil provided such facility:

(A) has and at all times had since January 1, 1978, a crude oil capacity of not more than 55,000 barrels per stream day; and

(B) has not been, at any time since September 1, 1988, owned or controlled by any refiner that at the same time owned or controlled refineries in California with a total combined crude oil capacity of more than 55,000 barrels per stream day; and

(C) has not been at any time since September 1, 1988, owned or controlled by any refiner that at the same time owned or controlled refineries in the United States with a total combined crude oil capacity of more than 137,500 barrels per stream day; and

(D) has received a two-year extension for compliance with California Air Resources Board's Phase II Reformulated Gasoline Requirements.

(15) STANDARD CONDITIONS means the atmospheric state where the temperature is 60^oF and barometric pressure is 14.7 pounds per square inch absolute.

(16) STREAM DAY means any day or part of a day when a facility or a process unit is in operation.

(c) Sulfur Content Requirements

(1) Natural gas
A person shall not transfer, 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
On or after the applicable compliance dates specified in Table 1, a person shall not burn in equipment requiring a Permit to Operate, purchase, transfer, sell or offer for sale for use in the jurisdiction of the District, any gaseous fuel containing sulfur compounds calculated as H_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 Period	Compliance Date On or After
Refinery Gas	40	4 hrs	May 4, 1996
Small Refiners	40	4 hrs	May 4, 1994

Other Refiners			
Landfill Gas	150	Daily	June 12, 1998
Sewage Digester Gas	40 or 40 and 500	Daily or Monthly and 15-minutes	November 17, 1995 November 17, 1995
Other Gases	40	4 hrs	May 4, 1994

(3) Optional Facility Compliance Plan ("OFCP")
A person may comply with paragraph (c)(2) by achieving equivalent sulfur oxides (SO_x) emission reductions within the facility, provided that the applicant submits and complies with an Optional Facility Compliance Plan ("OFCP") which has been approved in writing by the Executive Officer. The OFCP shall:

(A) Contain, at a minimum, all data, records, and other information necessary to determine eligibility for alternative emission control, including but not limited to:

(i) A list of equipment and a description of the equipment where the gaseous fuel is being produced and/or burned;

(ii) The amount of fuel produced by and/or to be burned in each piece of equipment listed in clause (c)(3)(A)(i);

(iii) The estimated emissions of sulfur dioxide from each piece of equipment; and

(iv) Historical and projected information on fuel usage;

(B) Demonstrate that daily total SO_x emissions under the OFCP from all sources within the facility regulated under Rule 431.1 would be less than or equal to SO_x emissions that would have been emitted based on actual total SO_x emissions from each source, or the sulfur content limits of this rule, whichever results in lower SO_x emissions. The total SO_x emissions generated from the subject fuel shall be determined using a continuous emission monitoring system (CEMS) specified in subdivision (d). The total emissions may be determined by monitoring the sulfur dioxide emissions from at least 70 percent of the total fuel gas consumed as obtained from a totalizing meter, and calculating the total emissions using the CEMS data;

(C) Demonstrate that the permit units subject to the specified rule emission limitations are in compliance with all applicable District rules or are on an approved schedule of compliance; and

(D) Demonstrate compliance with the continuous monitoring requirements as specified in subdivision (d) of this rule.

(4) 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 paragraph (g)(8); 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 Executive Officer 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 Executive Officer an application for a fuel gas control system within six months of the time of exceedance of the exemption criteria specified in paragraph (g)(8), or non-compliance with the limit;

(C) Demonstrate compliance with the limit specified in Table 1 no later than eighteen (18) months after the time of exceedance; and

(D) Comply with paragraphs (d)(1) and (d)(2), or (d)(3).

(d) Monitoring Requirements

(1) Except as provided in paragraph (d)(3), a person burning gaseous fuels, other than exclusively natural gas, in stationary equipment requiring a Permit to Operate 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 paragraph (c)(4) of this rule shall comply with paragraphs (d)(1) and (d)(2) no later than twelve months after the date a Permit to Construct is issued by the District for a sulfur removal system or comply with paragraph (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 U.S. EPA 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 Executive Officer 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 Executive Officer shall be corrected within 72 hours.

(i) The person operating the CFGMS or CEMS shall notify the Executive Officer 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 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 clause (d)(2)(B)(i) and paragraph (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 paragraph (c)(4) of this rule may use an alternative monitoring method, in lieu of the requirements in paragraphs (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 Executive Officers of the District, 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 (c)(4) of this rule shall submit an alternative monitoring method for approval no later than 45 days after the date a Permit to Construct 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 two 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 District Permit to Operate, shall submit to the Executive Officer 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 paragraphs (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 Executive Officer monthly reports of the daily fuel consumption, the monthly weighted average sulfur content (except for natural gas), and the maximum 4-hour average sulfur content of the fuel consumed, as determined by the device specified in paragraph (d)(1) 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 shall be used by the Executive Officer to verify compliance with the provisions of this rule:

(1) For determination of compliance with sulfur content requirements of subdivision (c):

(A) The reference method for determining the concentration of sulfur compounds in a gaseous fuel, calculated as H_2S, shall be District 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 Executive Officers of the District, 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 subdivision (d) and as approved by the Executive Officer pursuant to the guidelines specified in Attachment A, or

(C) The results obtained using the approved alternative monitoring method as specified in (d)(3).

(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 Executive Officer, 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 paragraphs (c)

(1) and (c)(2) 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 paragraphs (c)(1) and (c)(2); and

(B) The seller notifies the Executive Officer 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 Permit to Construct and/or Operate 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 being burned from fluidized catalytic cracking unit (FCCU) regenerators subject to District Rule 1105 or Regulation XX.

(5) Gases vented during refinery turnaround pursuant to District Rule 1123 or Regulation XX.

(6) Gases vented to a control system pursuant to District Rule 466 and 1173 or Regulation XX.

(7) 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.

(8) Any facility which emits less than 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 paragraph (g)(1), and the maximum daily gaseous fuel consumption. This exemption shall not apply to the requirement of paragraph (c)(1).

(9) A person is exempt from the requirements of paragraphs (d)(1) and (d)(2) if the person demonstrates to the satisfaction of the Executive Officer that the supplier of the gaseous fuel has complied with the requirements of subdivision (d) for such fuel.

(10) Until December 31, 1998, a person burning LFG is exempt from the requirements of paragraph (d)(1) and (d)(2) provided that they determine and report the sulfur content of the fuel gas according to the approved Rule 1150.1 Compliance Plan for the landfill providing the LFG. If the person burning LFG elects to use an alternative monitoring method as specified in paragraph (d)(3), the plan or revision to the plan shall be submitted to the District by September 1, 1998 and the sulfur content of the fuel gas shall be determined and reported according to the approved Rule 1150.1 Compliance Plan for the landfill providing the LFG, until plan approval or disapproval.

(11) 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 paragraph (c)(4) provided that: the alternative monitoring method pursuant to paragraph (d)(3) 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.

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 subparagraph (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.

ATTACHMENT A

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 H_2S in the gaseous fuels;

(5) Use District Methods 100.1 or 6.1 (as applicable for sulfur compound analysis) and District Method 3.1 (for oxygen content analysis), or District 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 Executive Officers of the District 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 subparagraph (d)(2)(B) of this rule.

(7) Facilities burning fuel gas subject to this rule shall comply with the requirements of Rule 218 except where specific requirements have been incorporated into this rule.

ATTACHMENT A

SECTION III
GUIDELINES FOR APPROVAL OF ALTERNATIVE MONITORING PLAN BY THE EXECUTIVE OFFICER

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 Executive Officers of the District, 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 District Method 307-91. If a correlation is established, a colorimetric test, or other alternative method approved by the Executive Officer 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 District Method 307-91. To demonstrate equivalency between the two methods of analyses, the relative accuracy shall not exceed 20 percent of average District 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 District Method 307-91. A different frequency of analysis may be used if the Executive Officer 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 District Method 307-91 until three consecutive daily samples show that total sulfur is below the sulfur content requirements of Table 1.

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

(Adopted Dec. 2, 1977)(Amended October 20, 1978)(Amended Feb. 2, 1979)

(Amended August 2, 1985)(Amended May 4, 1990)

RULE 431.2. SULFUR CONTENT OF LIQUID FUELS

(a) Definitions

For purposes of this rule, DIESEL FUEL is a liquid fuel that is commonly known as diesel fuel no. 1-D or 2-D pursuant to the specifications in ASTM D 975-81, Standard Specifications for Diesel Fuel Oils, and which has an API gravity of 26 or more.

(b) General Requirements

(1) Until September 30, 1993, a person shall not burn or purchase, sell, or offer for sale to be burned in the District, any:

(A) diesel fuel with a sulfur content in excess of 0.05 percent by weight; or

(B) liquid fuel with an API gravity of less than 26 with a sulfur content in excess of 0.25 percent by weight for stationary equipment at refineries or electric power plants; or

(C) liquid fuel with an API gravity of less than 26 with a sulfur content in excess of 0.5 percent by weight for all other stationary combustion equipment.

(2) On and after October 1, 1993:

(A) A person shall not burn, purchase, sell, or offer for sale to be burned in the District, any liquid fuel having a sulfur content in excess of 0.05 percent by weight, except as provided below:

(i) Existing supplies of any liquid fuel as of October 1, 1993, with sulfur content higher than 0.05 percent in storage may be used until such supply is exhausted.

(ii) A person shall report to the Executive Officer any existing liquid fuel inventory of more than 251 gallons as of

October 1, 1993, and maintain a record of the consumption and any new liquid fuel purchases, which are mixed with such existing fuel inventory. This information shall be available to the District staff upon request.

(B) A person selling any liquid fuel subject to the provisions of this rule shall provide the customer with specifications for the sulfur content of the fuel, determined according to the test method specified in paragraph (d) of this rule. Such specification shall be provided to any subsequent customer or user of the liquid fuel.

(C) A person shall not burn diesel fuel in permitted internal combustion engines in the District, unless such fuel meets the ARB specifications for motor vehicle diesel fuel, contained in Section 2256, Title 13, California Code of Regulations.

(c) Recordkeeping Requirements

(1) A person burning liquid fuel in any calendar year, in stationary permitted equipment, except at electric power

plants and refineries, shall submit to the Executive Officer an annual report of the monthly fuel consumption and the sulfur content of the fuel consumed at each location.

(2) A person burning liquid fuels in stationary equipment at electric power plants and refineries shall submit to the Executive Officer a monthly report of the daily fuel consumption and the sulfur content of the fuel consumed at each location.

(3) The information specified in subparagraphs (c)(1) and (c)(2) of this rule shall be maintained at the facility for at least two years and made available to the District staff upon request.

(d) Test Methods

The sulfur content of liquid fuels shall be determined by ASTM Method D 4294 or D 2622-82, or any other equivalent method approved in writing by the Executive Officer.

(e) Equivalency

(1) Regardless of the provisions of paragraph (b) of this rule, a person may burn, purchase, sell, or offer for sale to be burned in the District liquid fuel with higher sulfur content provided that the resulting emissions into the atmosphere are not greater than the potential emissions with a fuel which complies with the provisions of this rule.

(2) The equivalency provisions of subparagraph (e)(1) shall be demonstrated to the satisfaction of the Executive Officer with a plan which describes at a minimum process conditions and/or control equipment that will remove sulfur compounds from the stack gases.

(f) Exemptions

The provisions of this rule shall not apply to:

(1) The use of liquid fuels where the gaseous products of combustion are used as raw materials for other processes.

(2) The use of liquid fuels to propel or test any vehicle, aircraft, aircraft engine, locomotive, boat or ship.

(3) The use of liquid fuels 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 the operation under this exemption, if any, are compensated by a reduction of at least twice such increased emissions at any other locations within the South Coast Air Basin and in a manner approved by the Executive Officer.

(Adopted May 7, 1976)

RULE 431.3 SULFUR CONTENT OF FOSSIL FUELS

(a) A person shall not burn any solid fossil fuel having a sulfur content which will emit more than 0.56 pounds of sulfur dioxide (SO_2) per million BTU.

(b) The provisions of this rule shall not apply to:

(1) The burning of solid sulfur compounds in the manufacturing of sulfur or sulfur compounds.

(2) The use of solid fossil fuels in any metallurgical process.

(3) The use of any solid fossil fuel where the gaseous products of combustion are used as raw materials for other processes.

(4) The use of solid fossil fuel to propel or test any vehicle, locomotive, boat, or ship.

(5) The use of a solid fossil fuel with higher sulfur content where process conditions or control equipment remove sulfur compounds from 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 provisions of this rule.

(c) Solid Fossil Fuel

For the purpose of this rule "Solid Fossil Fuel" means coal, or any form of solid fuel derived from fossil materials, for the purpose of creating useful heat.

South Coast Air Quality Management District

(Adopted May 7, 1976)(Amended September 2, 1977)(Amended March 3, 1978)
(Amended July 6, 1979)(Amended March 5, 1982)(Amended December 15, 2000)

RULE 442 - USAGE OF SOLVENTS

(a) Purpose
The purpose of this rule is to reduce emissions of Volatile Organic Compounds (VOCs) from VOC-containing materials or equipment not subject to the VOC limits in any Regulation XI rule.

(b) Applicability
This rule applies to any person using VOC-containing materials or equipment that emit Volatile Organic Compounds (VOCs), and are not subject to VOC limits in any Regulation XI rule. 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. Equipment and materials include, but are not limited to, coating, adhesive, and ink application equipment, metal forming, casting, or forging operations.

(c) Definitions
For the purpose of this rule, the following definitions shall apply:

(1) AEROSOL PRODUCT is a hand held, non-refillable container that expels pressurized materials by means of a propellant-induced force.

(2) 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.

(3) VOLATILE ORGANIC COMPOUND (VOC) is as defined in Rule 102.

(4) VOC-CONTAINING MATERIAL is any VOC-containing product including, but not limited to, coatings, resins, adhesives, inks, solvents, thinners, diluents, mold seal and release compounds, lubricants, cutting and quenching oils.

(5) SOLVENT means ORGANIC SOLVENT as defined in Rule 102.

(d) Requirements

(1) On or before December 31, 2002, a person shall not discharge organic materials into the atmosphere from equipment in which organic solvents or materials containing organic solvents are used, unless such emissions have been reduced by at least 85 percent or to the following:

(A) Organic materials that come into contact with flame or are baked, heat cured or heat polymerized, are limited to not to exceed 6.5 kilograms (14.3 pounds) per day.

(B) Organic materials emitted into the atmosphere from the use of photochemically reactive

solvents are limited to 18 kilograms (39.6 pounds) per day, except as provided in subparagraph (d)(1)(A).

(C) Organic materials emitted into the atmosphere from the use of non-photochemically reactive solvents are limited to 272 kilograms (600 pounds) per day except as provided in subparagraph (d)(1)(A).

(2) Effective January 1, 2003, a person shall not emit VOCs to the atmosphere from all VOC-containing materials, equipment or processes subject to this rule, in excess of 833 pounds per month per facility. Emissions may be reduced through the use of the following:

(A) Product reformulation or substitution, process changes, improvement of operational efficiency, and/or the development of innovative technology; or

(B) Any combination of emission control device and subparagraph (d)(2)(A) provided that the operator submits an Alternative Compliance Plan that is approved by the Executive Officer. The Executive Officer shall not approve an alternative compliance plan, unless the plan has demonstrated real, quantifiable, and verifiable emission reductions.

(3) In lieu of paragraph (d)(2), a person may install an emission control device operated in accordance with subdivision (e).

(e) Control Equipment

A person may comply with paragraphs (d)(1) or (d)(2) by using a VOC emission collection and control system that reduces overall emissions by 85 percent as follows:

(1) the emission collection and control system shall capture at least 90 percent, by weight, of the emissions generated by the equipment, material, or operation and

(A) have a destruction efficiency of at least 95 percent, by weight, or

(B) have an output of less than 50 parts per million (PPM) calculated as carbon with no dilution.

(f) Test Methods

For the purpose of this rule, the following test methods shall be used, or any other test methods approved by the California Air Resources Board, the United States Environmental Protection Agency, and the District.

(1) Determination of VOC Content in Solvent-containing materials

The VOC content of VOC-containing 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 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,

(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 subdivision (d), only when manufacturers specify which individual compounds are used in the solvent formulation and 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 Presence of VOC in Clean-up Materials

The presence of VOC in the headspace over the cleaning material shall be determined by SCAQMD Method 313 [Determination of Presence of Volatile Organic Compounds (VOC) in a Headspace] contained in the SCAQMD "Laboratory Methods of Analysis for Enforcement Samples" manual.

(3) Determination of Efficiency of Emission Control Systems

(A) 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 (PTE) and 100% capture efficiency as defined by U.S. EPA Method 204, "Criteria for and Verification of a Permanent or Temporary Total Enclosure." Alternatively, if a US EPA Method 204 defined PTE is not employed, capture efficiency shall be determined using a minimum of three sampling runs subject to data quality criteria presented in the US EPA technical guidance document "Guidelines for Determining Capture Efficiency, January 9, 1995." Individual capture efficiency test runs subject to the US EPA technical guidelines shall be determined by:

(i) The Temporary Total Enclosure (TTE) approach of US EPA Methods 204 through 204F; or

(ii) The District "Protocol for Determination of Volatile Organic Compounds (VOC) Capture Efficiency."

(B) 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, District Method 25.1 - Determination of Total Gaseous Non-Methane Organic Emissions as Carbon, or District Method 25.3 – Determination of Low Concentration Non-Methane Non-Ethane Organic Compound Emissions from Clean Fueled Combustion Sources, as applicable. US EPA Test Method 18 or ARB Method 422 shall be used to determine emissions of exempt compounds.

(C) 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

(3) Multiple Test Methods

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 Executive Officer. In addition, 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) All test methods referenced in this section shall be the most recent version as approved by the USEPA.

(g) Recordkeeping Requirements
Usage records for all VOC-containing materials subject to this rule shall be maintained pursuant to Rule 109. Such records shall be retained for two years and shall be made available at the request of the Executive Officer or his representative. A person who complies with the requirement of (d)(2) before January 1, 2003 may keep daily or monthly records in accordance with Rule 109.

(h) Storage and Disposal
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.

(i) 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 Volatile Organic Compounds (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 said rules.

(C) The use of pesticides, including insecticides, rodenticides, or herbicides.

(D) Aerosol products.

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SouthCoast
6/9/87

(Adopted December 5, 1986)

RULE 443.1. LABELING OF MATERIALS CONTAINING ORGANIC SOLVENTS

(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 volatile organic compound (VOC) or material containing VOC manufactured after July 1, 1987, unless the maximum VOC expressed in grams of VOC per liter of material and in grams of VOC per liter of coating less water and less exempt solvents is clearly and correctly indicated on or supplied with the container; and

(1) For coatings and/or materials for which the manufacturer recommends the addition of VOC (thinning) before application or use, the thinning instructions, along with grams of VOC per liter of coating less water and less exempt solvent and the grams of VOC per liter of material after the recommended thinning, shall be clearly and correctly indicated on or supplied with the container; and

(2) For multi-packaged coatings, coatings and/or materials that are mixed before application or use, the mixing instructions and the grams of VOC per liter of coating less water and less exempt solvent after the recommended mixing shall be clearly and correctly indicated on or supplied with the container; and

(3) For coatings that contain reactive diluents, the VOC contents in the VOC not consumed during curing shall be clearly and correctly indicated on or supplied with the container. The grams of VOC per liter of coating shall be calculated by the following equation:

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

These requirements may be satisfied by furnishing a data sheet or 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 one gallon capacity or larger, any solvent containing VOC manufactured after July 1, 1987, unless the maximum grams of VOC per liter of material and the vapor pressure of the VOC at 20°C is clearly and correctly indicated on the container. This requirement may be satisfied by furnishing a data sheet or by affixing a sticker or label to the container which sets forth this information.

(c) The provisions of this Rule shall not apply to architectural coatings, materials registered by the USDA as insecticides, pesticides or herbicides, or to materials primarily used as fuels.

(d) A Volatile Organic Compound (VOC) is any volatile compound of carbon excluding methane, carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates, ammonium carbonate, 1,1,1-trichloroethane, methylene chloride, trifluoromethane (FC-23), trichlorotrifluoroethane (CFC-113), dichlorodifluoromethane (CFC-12), trichlorofluoromethane (CFC-11), chlorodifluoromethane (CFC-22), dichlorotetrafluoroethane (CFC-114), and chloropentafluoroethane (CFC-115).

(e) Methods of Analysis
The volatile organic content of coatings subject to the provisions of this Rule shall be determined by procedures in the District's "Laboratory Method of Analysis for Enforcement Samples" manual.

(f) Grams of VOC per liter of coating less water and less exempt compounds is the weight of VOC per the combined volume of VOC and volume of coating solids and can be calculated by the following equation:

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

(g) 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

(h) Exempt Compounds are any of the following compounds: 1,1,1-trichloroethane, methylene chloride, trifluoromethane (FC-23), trichlorotrifluoroethane (CFC-113), dichlorodifluoromethane (CFC-12), trichlorofluoromethane (CFC-11), chlorodifluoromethane (CFC-22), dichlorotetrafluoroethane (CFC-114), and chloropentafluoroethane (CFC-115).

(i) Containers for all coatings and materials subject to paragraph (a) shall display the date of manufacture of the contents or a code indicating the date of manufacture. The manufacturers of such coatings shall file the codes with the Executive Officer of the District.

(Adopted May 7, 1976)

RULE 443. LABELING OF SOLVENTS

(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.

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

Sections highlighted were not adopted on May 3, 2013 and are scheduled to be heard at the June 7, 2013 Governing Board meeting

(Adopted October 8, 1976)(Amended October 2, 1981)
(Amended October 2, 1987)(Amended December 21, 2001)
(Amended November 7, 2008)(Amended May 3, 2013)

RULE 444. OPEN BURNING

(a) Purpose

The purpose of this rule is to ensure open burning in the District is conducted in a manner that minimizes emissions and impacts, and that smoke is managed consistent with state and federal law in order to protect public health and safety.

(b) Applicability

The provisions of this rule shall apply to any person conducting or allowing any open burning including, but not limited to:

(1) Agricultural burning
(2) Disposal of Russian thistle (*Salsola kali* or "tumbleweed")
(3) Prescribed burning
(4) Fire prevention/suppression training
(5) Open detonation or use of pyrotechnics
(6) Fire hazard removal
(7) Disposal of infectious waste, other than hospital waste
(8) Research of testing materials, equipment or techniques
(9) Disposal of contraband
(10) Residential burning
(11) Beach burning

(c) Definitions

(1) AGRICULTURAL BURNING means open burning of vegetative materials produced wholly from the growing and harvesting of crops in agricultural operations, including the burning of grass and weeds in fence rows, ditch banks and berms in non-tillage orchard operations, fields being prepared for cultivation, agricultural wastes, and the operation or maintenance of a system for the delivery of water for agricultural operations.

(2) AGRICULTURAL OPERATIONS means any business occurring on a ranch or farm directly related to:

(A) Growing of crops

(B) Raising of fowl or other animals for the primary purpose of making a profit or for a livelihood

(C) Conducting agricultural research or instruction by an educational institution

(3) AGRICULTURAL WASTES means unwanted or unsalable materials produced wholly from agricultural operations directly related to the growing of crops or raising of animals for the primary purpose of making a profit or for a livelihood. Agricultural wastes do not include items such as plastic, rubber, ornamental or landscape vegetation, chemically treated wood, shop wastes, construction and demolition material, material containing asbestos, garbage, oil filters, tires, tar paper, pesticide and fertilizer containers, broken boxes, pallets, sweat boxes, packaging material, packing boxes or any other material produced in the packaging or processing of agricultural products. Orchard or vineyard waste or any other material, generated as a result of land use conversion to nonagricultural purposes is not agricultural waste.

(4) AIR QUALITY INDEX (AQI) is a value established by the federal Environmental Protection Agency (EPA) to measure the level of the major air pollutants regulated by the Clean Air Act. The values range from 0 to 500 and are divided into six categories; higher values indicate greater levels of pollution and greater associated health concerns. The following summarizes the AQI:

(A) 50 or below is Good

(B) 51 through 100 is Moderate

(C) 101 through 150 is Unhealthy for Sensitive Groups

(D) 151 through 200 is Unhealthy

(E) 201 through 300 is Very Unhealthy

(F) Over 300 is Hazardous

(5) APPROVED IGNITION DEVICES means those instruments or materials that will ignite agricultural waste without the production of black smoke. This would include such devices using liquid petroleum gas, butane, propane, or diesel oil burners and flares where the device produces a flame and the flame is then used for ignition.

(6) APPROVED IGNITION FUELS means pipeline quality natural gas, liquefied petroleum gas, or a petroleum liquid having an API gravity of at least 30.

(7) BEACH BURNING means any recreational, ceremonial or open burning conducted in any public coastal area, marked by an accumulation of sand, stone, or gravel that has been deposited by the tide or ocean waves, including any adjacent areas used for beach access or recreation. For the purposes of this rule, beach burning does not include the use of charcoal or gaseous or liquid fuels.

(8) BURN AUTHORIZATION NUMBER is the number that is assigned to a burn project upon being granted approval by the Executive Officer.

(9) BURN MANAGEMENT PLAN means a document prepared by an agricultural operator for a project which provides a description of the project, and other information as required under subparagraph (d)(7)(D).

(10) BURN PROJECT means an active or planned prescribed burn, agricultural burn, fire prevention/suppression training, a naturally ignited wildland fire managed for resource benefits, or any other burn approved by the Executive Officer.

(11) EMERGENCY BURN PLAN means a document prepared by an agricultural operator for open burning as an emergency measure to protect crops from freezing which provides a description of the project, and other information as required under subparagraph (h)(4)(C).

(12) FIELD CROP means crop, other than fruit or vegetable, which is grown for agricultural purposes.

(13) FIRE HAZARD means a hazardous condition involving combustible, flammable, or explosive material that could present a substantial threat to life or property, as declared by a fire protection agency.

(14) FIRE PREVENTION/SUPPRESSION TRAINING means the instruction of employees in the methods of preventing or suppressing fires.

(15) FIRE PROTECTION AGENCY means any public agency with the responsibility and authority to protect people, property, and the environment from fire, within its respective area of jurisdiction.

(16) HEAVY FUELS means materials that burn slowly, sustain heat, and are difficult to extinguish. Heavy fuels include large downed woody materials such as logs and branches.

(17) IMMINENT FIRE HAZARD means a fire hazard that presents an immediate danger to property or the health and/or safety of a person or persons and for which direct abatement by fire is necessary as directed by a fire protection agency. An imminent fire hazard is distinguished from a prescribed burn by the immediate or urgent action needed to alleviate a threat.

(18) LAND MANAGER means any federal, state, local, or private entity that administers, directs, oversees, or controls the use of public or private land, including the application of fire to the land.

(19) LIGHT FUELS means materials that burn quickly with a short period of intense heat such as grass and field crops.

(20) MANDATORY WINTER BURNING CURTAILMENT means a period of time during the consecutive months of November through February where the burning of solid fuels is restricted for portions of the South Coast Air Basin at elevations below 3,000 feet above Mean Sea Level (MSL) based on the air quality criteria contained in AQMD Rule 445 (Wood-Burning Devices).

(21) MARGINAL BURN DAY means a day in an air basin when open burning for individual projects is restricted to designated source/receptor areas and is not otherwise prohibited by the California Air Resources Board (CARB) or the Executive Officer of the District. A marginal burn day is declared when:

(A) At least one of the meteorological criteria for an air basin is predicted to be met;

(B) The AQI throughout the basin is predicted to be 150 or less;

(C) The AQI in the designated source/receptor area(s) is predicted to be 100 or less; and

(D) The designated source/receptor area(s) is not further restricted by a mandatory winter burning curtailment pursuant to AQMD Rule 445 (Wood-Burning Devices).

(22) METEOROLOGICAL CRITERIA defines the daily predicted meteorological conditions that need to be satisfied to permit open burning for an air basin. The criteria are as follows:

(A) Burn Area 40: South Coast Air Basin (at least one criterion must be satisfied):

(i) Near 6:00 a.m., the expected height of the inversion base, if any, at Los Angeles International Airport is 1,500 feet above mean sea level or higher.

(ii) The expected maximum mixing height during the day is 3,500 feet above the surface.

(iii) The expected mean surface wind between 6:00 a.m. and noon is greater than five miles per hour.

(B) Burn Area 53: Mojave Desert Air Basin (all criteria must be satisfied):

(i) Near the time of day when the surface temperature is at a minimum, the temperature at 3,000 feet above the surface is not warmer than the surface temperature by more than 13 degrees Fahrenheit.

(ii) The expected temperature at 3,000 feet above the surface is colder than the expected surface temperature by at least 11 degrees Fahrenheit for 4 hours.

(iii) The expected daytime wind speed at 3,000 feet above the surface is at least 5 miles per hour.

(C) Burn Area 55: Salton Sea Air Basin (at least three criteria must be satisfied):

(i) Near the time of day when the surface temperature is at a minimum, the temperature at 3,000 feet above the surface is not warmer than the surface temperature by more than 13 degrees Fahrenheit.

(ii) The expected temperature at 3,000 feet above the surface is colder than the expected surface temperature by at least 11 degrees Fahrenheit for 4 hours.

(iii) The expected daytime wind speed at 3,000 feet above the surface is at least 5 miles per hour.

(iv) The expected daytime wind direction in the mixing layer is not southeasterly.

(23) NO BURN DAY means a day in an air basin during which open burning is prohibited by the CARB or Executive Officer of the District. A no burn day is declared when:

(A) None of the meteorological criteria for an air basin are met, or

(B) The AQI in any area of the basin is predicted to be greater than 150.

(24) OPEN BURNING COMBUSTION/OPEN DETONATION means the ignition and subsequent burning, or ignition, rapid decomposition and subsequent burning of solid, liquid, or gaseous materials, outside of a combustion chamber with or without a visible flame and not directed through a chimney or flue.

(25) PERMISSIVE BURN DAY means a day in an air basin during which open burning is not prohibited by the CARB or Executive Officer of the District. A permissive burn day is declared when:

(A) At least one of the meteorological criteria for an air basin is predicted to be met,

(B) The AQI throughout the basin is predicted to be 100 or less, and

(C) The designated source/receptor area(s) is not further restricted by a mandatory winter burning curtailment pursuant to AQMD Rule 445 (Wood-Burning Devices).

(26) PRESCRIBED BURNING means planned open burning conducted by a public agency, or through a cooperative agreement or contract involving a public agency, identified on lands selected in advance for removal of:

(A) Vegetation from land predominantly covered with chaparral, trees, grass, or standing brush.

(B) Forest vegetation or debris for the purposes of forest protection.

(C) Brush, weeds, arundo, or other plant matter to promote a healthier environment for plant or animal species or to re-establish native plant species.

(D) Disease and pest prevention.

(E) Fire prevention/suppression training consuming greater than 10 acres.

(27) PRODUCT TESTING means the evaluation of commercial products designed to detect the presence of flame or smoke or intended to prevent equipment damage due to flame.

(28) RESIDENTIAL BURNING means open burning for the purposes of disposing of combustible or flammable solid waste, excluding Russian thistle, from a specific residence on its premises.

(29) SENSITIVE RECEPTOR LOCATIONS include schools, daycare centers, hospitals, and convalescent homes, and other locations where children, chronically ill individuals, or other sensitive persons could be exposed.

(30) SMOKE MANAGEMENT PLAN means a document prepared for each open burning event or project by land managers that provides information and procedures to minimize smoke impacts.

(31) SOURCE/RECEPTOR AREAS. A source area is that area in which contaminants are discharged and a receptor area is that area in which the contaminants accumulate and are measured. Any area can be a source area, a receptor area, or both a source and receptor area. The source/receptor areas are delineated on the attached map (Attachment 1).

(32) WILDLAND means:

(A) "Wildland" means an area where development is generally limited to roads, railroads, power lines, and widely scattered structures. Such land is not cultivated (i.e., the soil is disturbed less frequently than once in 10 years), is not fallow, and is not in the United States Department of Agriculture (USDA) Conservation Reserve Program. The land may be neglected altogether or managed for such purposes as wood or forage production, wildlife, recreation, wetlands, or protective plant cover.

(B) For the California Department of Forestry and Fire Protection only, "Wildland" as specified in California Public Resources Code (PRC) section 4464(a) means any land that is classified as a state responsibility area pursuant to article 3 (commencing with section 4125) of chapter 1, part 2 of division 4 and includes any such land having a plant cover consisting principally of grasses, forbs, or shrubs that are valuable for forage. "Wildland" also means any lands that are contiguous to lands classified as a state responsibility area if wildland fuel accumulation is such that a wildland fire occurring on these lands would pose a threat to the adjacent state responsibility area.

(d) Requirements and Prohibitions

(1) A person shall not conduct or allow open burning unless all of the following are met:

(A) The Executive Officer has declared the day a permissive burn day or a marginal burn day on which burning is permitted in the

applicable source/receptor area and such burning is not prohibited by the applicable public fire protection agency.

(B) The Executive Officer or the applicable fire protection agency has issued a written permit for the burn. For disposal of Russian thistle, subject to paragraph (d)(2)(C), a permit may also be issued by the Director of Forestry and Fire Protection or a County Agricultural Commissioner, pursuant to California Health and Safety Code Section 41809.

(C) The Executive Officer has authorized the burn by issuing a Burn Authorization Number for each day for each open burning event.

(i) The Executive Officer has received the Burn Authorization Number request by 4:00 p.m. on the day prior to the burn.

(ii) The Executive Officer may delay issuing a Burn Authorization Number until such time that an inspection of the proposed Burn Project can be conducted, in order to determine whether the open burning event complies with the provisions of the rule.

(D) All site-specific permit conditions are met, pursuant to Rule 208 – Permit and Burn Authorization for Open Burning.

(2) The Executive Officer may authorize open burning for:

(A) Agricultural burning

(B) Prescribed burning

(C) Disposal of Russian thistle

(D) Abatement of a fire hazard that a fire protection agency determines cannot be abated by an economically, ecologically and logistically viable option

(E) Disposal of waste infected with an agricultural pest or disease hazardous to nearby agricultural operations and upon the order of the County Agricultural Commissioner

(F) Disposal of infectious waste, other than hospital waste, upon the order of the County Health Officer to abate a public health hazard

(G) Use of pyrotechnics for the creation of special effects during filming of motion pictures, videotaping of television programs or other commercial filming or video production activities provided untreated wood, charcoal or Approved Ignition Fuels are used

(H) Disposal of contraband in the possession of public law enforcement personnel provided they demonstrate that open burning is the only reasonably available method for safely disposing of the material

(I) Fire prevention/suppression training exercises, provided notifications and compliance with all requirements of Rule 1403 – Asbestos Emissions from Demolition/Renovation Activities shall be required when applicable

(J) Researching or testing fire retardant properties of materials (or enclosures) or the efficacy of fire suppression techniques or devices

(3) A person is prohibited from open burning for:

(A) Residential burning

(B) Disposal of waste, except as specified in (d)(2) above, including hospital waste

(C) Disposal of materials generated as a result of land use conversion for non-agricultural purposes

(D) Disposal of materials from the production or storage of military ordnance, propellants, or pyrotechnics unless a fire protection agency, law enforcement agency or governmental agency having jurisdiction determines that onsite burning or detonation in place is the only reasonably available method for safely disposing of the material

(E) Suppression of wildland fires, except those set by fire protection agencies, for the purpose of saving life or property

(F) Complete burning of existing structures for fire prevention/ suppression training exercises

(G) Beach burning, on and after January 1, 2015. However, a city or county may, through formal action of a city council or board of supervisors, make this prohibition effective sooner than January 1, 2015.

(4) A person shall not commence:

(A) Open burning for agricultural field crops before 10:00 a.m. or later than 5:00 p.m.

(B) Open burning, other than for agricultural field crops, except as authorized in an approved Smoke Management Plan:

(i) Earlier than one hour after sunrise

(ii) Later than two hours before sunset, with no new ignition, or fuels added to an existing fire

(5) A person shall use only approved ignition devices to ignite open burning.

(6) A person shall not transport vegetative waste for the purpose of open burning from one property to another, unless it is necessary to avoid burning within 1,000 feet of a sensitive receptor.

(7) Additional requirements for agricultural burning:

(A) A person shall not conduct or allow the open burning of agricultural waste unless it has been allowed to dry for the following minimum times:

(i) Trees and large branches (3 in. or greater): 6 weeks

(ii) Prunings and small branches (1 in. to less than 3 in. diameter): 4 weeks

(iii) Wastes from field crops that are cut in a green condition: 4 weeks

(iv) Fine fuels (0.25 in. to less than 1 in. diameter): 3 weeks

(v) Very fine fuels (less than 0.25 in.): 10 days

(B) A person shall not conduct or allow the open burning of agricultural waste unless it is free of dirt, soil, and visible moisture.

(C) A person shall ignite rice, barley, oat and wheat straw only by strip-firing or by backfiring into the wind unless a fire protection agency declares such actions would constitute a fire hazard.

(D) A person shall not conduct or allow the open burning of agricultural waste unless a Burn Management Plan is approved in writing by the Executive Officer for any project greater than 10 acres or a project that produces more than one ton of particulate matter emissions, as determined using EPA AP-42 or equivalent emissions factors approved by the Executive Officer, CARB, and EPA. At a minimum, the Burn Management Plan shall contain the following information:

(i) Location, types, and amounts of material to be burned

(ii) Expected duration of the fire from ignition to extinction

(iii) Identification of responsible personnel, including telephone contacts

(iv) Identification and location of all smoke sensitive areas

(v) Calculation of the particulate emissions tonnage, when the particulate emissions tonnage is selected as the criteria for determining the project size

(E) A person shall not conduct or allow the open burning of agricultural waste unless the burn is located farther than 1,000 feet from a sensitive receptor location.

(8) Additional requirements for prescribed burning:

(A) A person shall conduct or allow prescribed burning only when the fires are set by, under the jurisdiction of, or pursuant to the orders or requirements of a fire protection agency.

(B) A person shall not conduct or allow prescribed burning unless a Smoke Management Plan is approved in writing by the Executive Officer for any project greater than 10 acres or that produces more than one ton of particulate matter emissions, as determined using EPA AP-42 or equivalent emissions factors approved by the Executive Officer, CARB, and EPA. Smoke Management Plans shall be updated annually. At a minimum, the Smoke Management Plan shall contain the following information:

(i) Location, types, and amounts of material to be burned

(ii) Expected duration of the fire from ignition to extinction

(iii) Identification of responsible personnel, including telephone contacts

(iv) Identification and location of all smoke sensitive areas

(v) Calculation of the particulate emissions tonnage

(C) A person shall not conduct or allow prescribed burning unless a Smoke Management Plan is approved in writing by the Executive Officer for any project greater than 100 acres or that produces more than 10 tons of particulate matter emissions, as determined using EPA AP-42 or equivalent emissions factors approved by the Executive Officer, CARB, and EPA. Smoke Management Plans shall be updated annually. At a minimum, the Smoke Management Plan shall contain the information required by subparagraph (d)(8)(B) and the following information:

(i) Identification of meteorological conditions necessary for burning

(ii) Smoke management criteria the land manager will use for making burn ignition decisions

(iii) Projections, including a map, of where the smoke from burns is expected to travel both day and night

(iv) Specific contingency actions (such as fire suppression or containment) that will be taken if smoke impacts occur or meteorological conditions deviate from those specified in the Smoke Management Plan

(v) Evaluation of and consideration of emission reduction techniques including environmentally, economically, and logistically viable alternatives to burning

(vi) Discussion of public notification procedures

(D) The Executive Officer shall prioritize burn authorization requests based upon:

(i) The level of training of the person conducting the burn as identified in the Burn Management Plan and Smoke Management Plan.

(ii) The measures identified in the Smoke Management Plan proposed to reduce emissions.

(E) Notwithstanding subparagraph (d)(1)(A), the Executive Officer may allow prescribed burning on marginal burn days, provided a Smoke Management Plan has been approved.

(e) The Executive Officer may allow the Maximum Daily Burn Acreage for Agricultural Burning and Prescribed Burning as follows:

(1) For all areas within the District jurisdiction, excluding the Coachella Valley:

(A) 175 acres for prescribed wildland and range burning; and

(B) 175 acres for agricultural burning;

(2) For the Coachella Valley:

(A) 6 acres for prescribed wildland and range burning; and

(B) 41 acres for agricultural burning; and

(3) The provisions of this subdivision, limiting the maximum daily acreage, shall not apply to prescribed burning when a land manager has:

(A) Demonstrated that the prescribed burn is required to reduce a fire hazard that jeopardizes public health or safety; and

(B) Submitted a satisfactory Smoke Management Plan that has been approved by the Executive Officer.

(f) Administrative Requirements

(1) An Annual Post Burn Evaluation Report shall be submitted on or before January 31st of each calendar year for any open burn projects that require a Smoke Management Plan or a Burn Management Plan. The Report shall include, but not be limited to, the following:

(A) The type of material burned

(B) The total acreage permitted to burn

(C) The total acreage burned

(D) The total tons of material burned

(E) The estimated fuel loading in tons per acre

(F) The total of the estimated PM emissions

(2) Fire Protection Agencies within the District must submit copies of written burn permits to the Executive Officer quarterly.

(g) Fees

If required by District Rule 306, any person conducting or allowing any open burning shall accompany the submittals required by subparagraphs (d)(7)(D), (d)(8)(B), (d)(8)(C), (h)(4)(C), and paragraph (f)(1) with applicable filing and evaluation fees pursuant to District Rule 306.

(h) Exemptions

(1) The provisions of paragraphs (d)(1) and (d)(4) of this rule shall not apply in the case of an imminent fire hazard, as defined in this Rule.

(2) The provisions of subparagraphs (d)(1)(A), (d)(1)(B), (d)(1)(D) and clause (d)(1)(C)(ii) shall not apply to fire prevention/suppression training exercises or research, conducted by fire protection agencies, provided that:

(A) For training exercises not conducted within existing structures:

(i) Each training fire is limited to no more than 30 minutes duration,

(ii) The total cumulative burn time in a 24-hour period does not exceed:

(a) Four (4) hours for Light Fuel

(b) Six (6) hours for Heavy Fuels or a mixture of Light and Heavy Fuels

(iii) Only Authorized Ignition Fuels are used.

(B) For training exercises conducted within existing structures, each training fire is limited to no more than 30 minutes in duration.

(3) The provisions of subparagraphs (d)(1)(A), (d)(1)(B), (d)(1)(D) and clause (d)(1)(C)(ii) shall not apply to fire prevention/suppression training exercises or to product testing conducted by non-fire protection agencies provided that:

(A) Each fire is limited to no more than 30 minutes in duration,

(B) The total burn time does not exceed four (4) hours in a 24-hour period, and

(C) Only Authorized Ignition Fuels are used.

(4) The provisions of subparagraphs (d)(1)(A) and (d)(7)(E) of this rule shall not apply to open burning as an emergency measure to protect crops from freezing provided that:

(A) Open burning is the most immediate or only option available;

(B) The temperature at the time of the requested open burning is reasonably anticipated to be below 40° Fahrenheit;

(C) An Emergency Burn Plan submitted by the person seeking to conduct open burning is approved by the Executive Office prior to conducting the burn. The Plan shall include, but not be limited to, the following:

(i) Location, types, and amounts of material to be burned

(ii) Type of crop being protected

(iii) Estimate of potential economic loss

(iv) Expected dates, time, and duration of the fire from ignition to extinction

(v) Identification of responsible personnel, including telephone contacts

(vi) Identification and location of all smoke sensitive areas

(D) All site-specific conditions imposed by the Executive Officer as part of the approved Emergency Burn Plan are met; and

(E) The person conducting the open burn shall notify the Executive Officer no more than 24 hours following the authorized burn to report the total amount of agricultural material burned.

(5) The provisions of this rule shall not apply to:

~~(A) Recreational fires or ceremonial fires, including fires conducted pursuant to United States Code, Title 4, Chapter 1, Section 8.~~

~~(B) Open burning of natural gas, propane, untreated wood, or charcoal for the purpose of:~~

~~(i) Preparation or warming of food for human consumption; or~~

~~(ii) Generating warmth at a social gathering.~~

(A) Open burning located on islands 15 miles or more from the mainland coast.

(B) Fireworks displays.

(C) Pyrotechnics used for creation of special effects at theme parks.

(D) Detonation of explosives during:

(i) Quarry or mining operations

(ii) Bomb disposal by a law enforcement agency

(iii) Demolition of buildings or structures

(E) The use of pyrotechnics, detonation of explosives, or fire effects for creation of special effects during theatrical productions, filming of motion pictures, videotaping of television programs or other commercial filming or video production activities provided that:

(i) Each fire effect is limited to no more than 30 minutes in duration, and

(ii) The fuel is untreated wood, charcoal, or Authorized Ignition Fuels.

(6) Except for the requirements of subparagraph (d)(3), the provisions of this rule shall not apply to:

(A) Recreational fires or ceremonial fires, including fires conducted pursuant to United States Code, Title 4, Chapter 1, Section 8.

(B) Open burning of natural gas, propane, untreated wood, or charcoal for the purpose of:

(i) Preparation or warming of food for human consumption; or

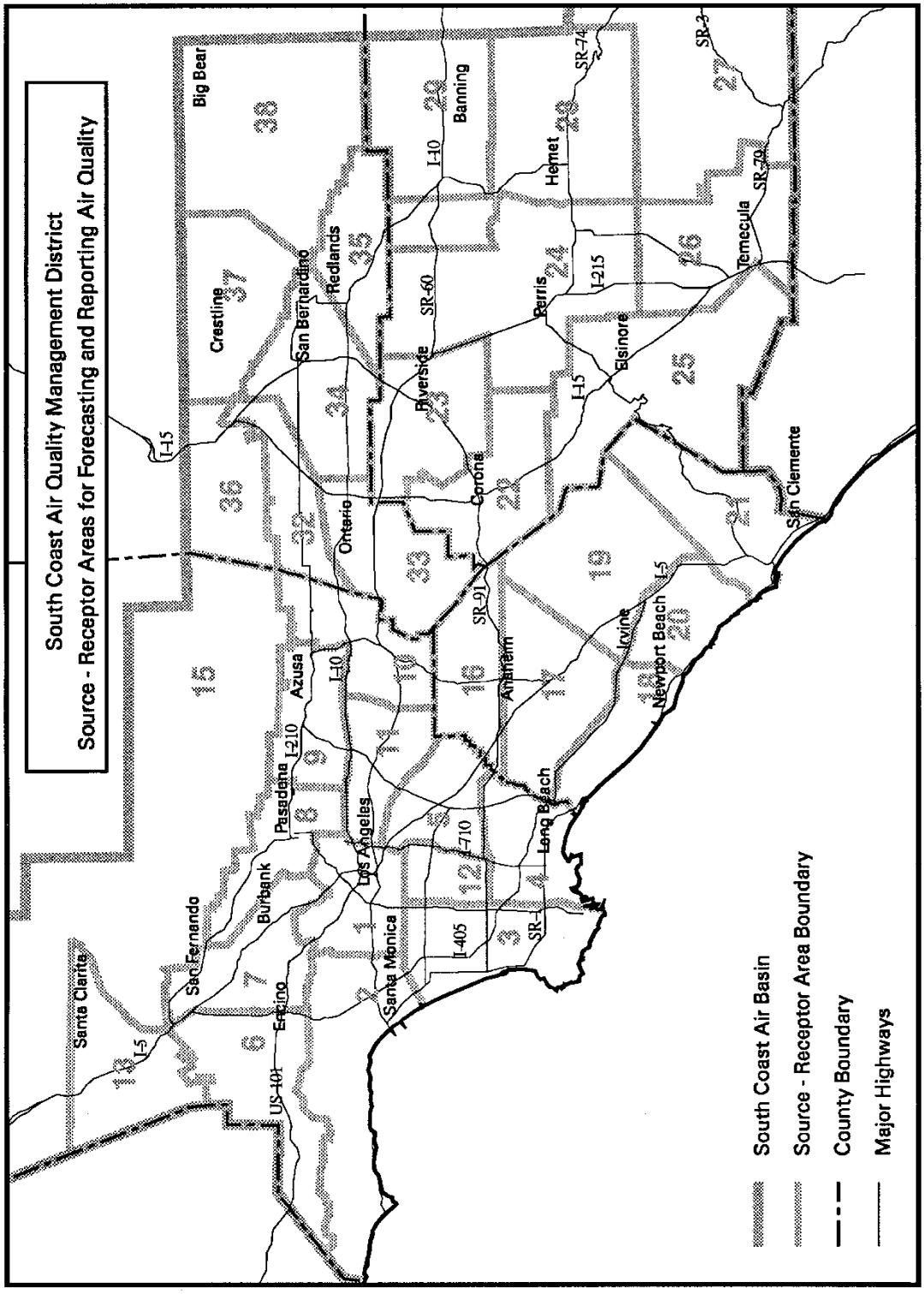
(ii) Generating warmth at a social gathering.

(i) Severability

If any provision of this rule is held by judicial order to be invalid, or invalid or inapplicable to any person or circumstance, such order shall not affect the validity

of the remainder of this rule, or the validity or applicability of such provision to other persons or circumstances.

ATTACHMENT 1



SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

(Adopted March 7, 2008)(Amended May 3, 2013)

RULE 445. WOOD-BURNING DEVICES

(a) Purpose

The purpose of this rule is to reduce the emission of particulate matter from wood-burning devices.

(b) Applicability

The provisions of this rule shall apply to specified persons or businesses within the South Coast Air Basin portion of the South Coast Air Quality Management District:

(1) Any person that manufacturers, sells, offers for sale, or installs a wood-burning device;

(2) Any commercial firewood seller that sells, offers for sale, or supplies wood or other wood-based fuels intended for burning in a wood burning-device or portable outdoor wood-burning device; and

(3) Any property owner or tenant that operates a wood-burning device or portable outdoor wood-burning device.

(c) Definitions

(1) COMMERCIAL WOOD-BASED FUEL SELLER means any operation that has a business license that sells, or offers for sale, or supplies packaged, bundled or bulk firewood, manufactured firelogs, or wood pellets.

(2) COOKSTOVE means any wood or wood-based fuel-fired device that is designed and used for cooking food and has the following characteristics as defined in Title 40 of the Code of Federal Regulations Section 60.531, February 28, 1988, or any subsequent revision:

(A) An oven, with a volume of 0.028 cubic meters (1 cubic foot) or greater, and an oven rack;

(B) A device for measuring oven temperatures;

(C) A flame path that is routed around the oven;

(D) A shaker grate;

(E) An ash pan;

(F) An ash clean-out door below the oven; and

(G) The absence of a fan or heat channels to dissipate heat from the appliance.

(3) DEDICATED GASEOUS-FUELED FIREPLACE means any indoor or outdoor fireplace, including, but not limited to, a gas log fireplace, either constructed on-site, or factory built, fueled exclusively with a gaseous fuel such that the burner pan and associated equipment are affixed to the masonry or metal base of the fireplace.

(4) FIREPLACE means any permanently installed indoor or outdoor masonry or factory-built device used for aesthetic or space-heating purposes and designed to operate with an air-to-fuel ratio greater than or equal to 35-to-1.

(5) LOW INCOME HOUSEHOLD means any household that receives financial assistance through reduced electric or gas bills from an electric or natural gas utility based on household income levels.

(6) MANDATORY WINTER BURNING CURTAILMENT

(A) Means any calendar day or consecutive calendar days during the wood burning season so declared to the public by the Executive Officer when ambient levels of particulate matter of 2.5 microns in size or less (PM2.5) is forecast to exceed 30 $\mu g/m^3$ for a specific source/receptor area.

(B) Applies to the entire South Coast Air Basin whenever a PM2.5 level of greater than 30 $\mu g/m^3$ is predicted for a source receptor area containing a monitoring station that has recorded a violation of the federal 24-hour PM2.5 National Ambient Air Quality Standard for either of the two previous three-year design value periods. The design value is the three-year average of the annual 98th percentile of the 24-hour values of monitored ambient PM2.5 data.

(7) MANUFACTURED FIRELOG means a commercial product expressly manufactured for use to simulate a wood burning fire in a wood-burning device.

(8) MASONRY HEATER means any permanently installed device that meets the definition of a masonry heater in ASTM E 1602-03.

(9) NEW DEVELOPMENT means residential or commercial, single or multi-building unit, which begins construction on or after March 9, 2009. For the purposes of this definition, construction has begun when the building

permit has been approved or when the foundation for the structure is started, whichever occurs first.

(10) PELLET-FUELED WOOD-BURNING HEATER means any wood-burning heater that is operated on any pellet fuel, and is either U.S. EPA Phase II-certified or exempted under U.S. EPA requirements as defined in Title 40 Code of Federal Regulations, Part 60, Subpart AAA, February 28, 1988, or any subsequent revision.

(11) PERMANENTLY INSTALLED means any device built or installed in such a manner that the device is attached to the ground, floor, or wall, and is not readily moveable. A free standing stove that is attached to an exhaust system that is built into or through a wall is considered permanently installed.

(12) PORTABLE OUTDOOR WOOD-BURNING DEVICE means any portable outdoor device burning any wood-based fuel for aesthetic or space heating purposes including, but not limited to, fireplaces, burn bowls, and chimineas located on property zoned for residential uses.

(13) SEASONED WOOD means wood of any species that has been sufficiently dried so as to contain 20 percent or less moisture content by weight as determined by

(A) ASTM Test Method D 4442-92, Standard Test Method for Use and Calibration of Hand-Held Moisture Meters; or

(B) A hand-held moisture meter operated in accordance with ASTM Test Method D 4444-92, Standard Test Methods for Use and Calibration of Hand-Held Moisture Meters; or

(C) An alternative method approved by the Executive Officer, the California Air Resources Board, and the U.S. Environmental Protection Agency.

(14) SOLE SOURCE OF HEAT means the only permanent source of heat that is capable of meeting the space heating needs of a household.

(15) SOUTH COAST AIR BASIN means the non-desert portions of Los Angeles, Riverside, and San Bernardino counties and all of Orange County as defined in California Code of Regulations, Title 17, Section 60104.

(16) TREATED WOOD means wood of any species that has been chemically impregnated, painted, coated or similarly modified to improve resistance to insects, wood rot and decay, or weathering.

(17) U.S. EPA CERTIFIED WOOD-BURNING HEATER means any device certified by the U.S. EPA to meet the performance and emission standards as defined in Title 40 Code of Federal Regulations, Part 60, Subpart AAA, February 28, 1988, or any subsequent revision.

(18) WOOD-BASED FUEL means any wood, wood-based product, or non-gaseous or non-liquid fuel, including but not limited to manufactured firelogs, wood or pellet products. For the purpose of this rule, charcoal is not considered a wood-based fuel.

(19) WOOD-BURNING DEVICE means any fireplace, wood-burning heater, pellet-fueled wood burning heater, or any similarly open or enclosed, permanently installed, indoor or outdoor device burning any wood-based fuel for aesthetic purposes, which has a heat input of less than one million British thermal units per hour (Btu/hr).

(20) WOOD-BURNING HEATER means an enclosed, wood-burning device capable of space heating that meets all the criteria defined in Title 40 Code of Federal Regulations Section 60.531, February 28, 1988, or any subsequent revision including, but not limited to, wood stoves and wood-burning fireplace inserts.

(21) WOOD BURNING SEASON means the consecutive entire months of November, December, January, and February.

(22) WOOD-FIRED COOKING DEVICE means any cookstove, wood-fired oven or grill, or any device designed for burning any wood-based fuel for cooking purposes.

(d) Requirements

(1) No person shall permanently install a wood-burning device into any new development.

(2) Notwithstanding the requirements of paragraph (d)(1), no person shall sell, offer for sale, supply, or install, a new or used permanently installed indoor or outdoor wood-burning device or gaseous-fueled device unless it is one of the following:

(A) A U.S. EPA Certified wood-burning heater; or

(B) A pellet-fueled wood-burning heater; or

(C) A masonry heater; or

(D) A dedicated gaseous-fueled fireplace.

(3) No person shall burn any product not intended for use as fuel in a wood-burning device including, but not limited to, garbage, treated wood, particle board, plastic products, rubber products, waste petroleum products, paints, coatings or solvents, or coal.

(4) A commercial firewood seller shall only sell seasoned wood from July 1 through the end of February the following year. Any commercial firewood seller may sell seasoned as well as non-seasoned wood during the remaining months.

(5) Labeling and Sell-Through Provision

(A) Effective November 4, 2013, no commercial firewood seller shall sell, offer for sale, or supply wood-based fuel without first attaching a permanently affixed indelible label to each package or providing written notice to each buyer at the time of purchase of bulk firewood that at a minimum states the following:

Use of this and other solid fuel products may be restricted at times by law. Please check (1-877-4NO-BURN) or (www.8774NOBURN.org) before burning.

(i) Alternative language, toll-free telephone number or web address for the information specified in subdivision (g) may be used, subject to Executive Officer approval.

(ii) The Executive Officer shall specify guidelines for the aforementioned labeling requirements.

(B) Any wood-based fuel packaged prior to November 4, 2013 may be sold, offered for sale or supplied up to November 4, 2015.

(e) Mandatory Winter Burning Curtailment

No person shall operate an indoor or outdoor wood-burning device, portable outdoor wood-burning device, or wood-fired cooking device during the wood burning season when a mandatory winter burning curtailment is forecast for the specific region where the device is located, or on a Basin-wide basis as defined in paragraph (c)(6).

(f) Exemptions

(1) The provisions of this rule shall not apply to wood-fired cooking devices designed and used for commercial purposes.

(2) The provisions of paragraph (d)(1) shall not apply to new developments where there is no existing infrastructure for natural gas service within 150 feet of the property line or those 3,000 or more feet above mean sea level.

(3) The provisions of paragraph (d)(2) shall not apply to an indoor or outdoor wood-burning device that is permanently installed and included in the sale or transfer of any existing development.

(4) The provisions of (d)(2) shall not apply to properties that are registered as a historical site, or are contributing structures located in a Historic Preservation Overlay Zone, as determined by the applicable, federal, State, or local agency. Contributing structures are those buildings which are examples of the predominate styles of the area, built during the time period when the bulk of the structures were built in the Historic Preservation Overlay Zone.

(5) The provisions of (d)(3) shall not apply to manufactured firelogs.

(6) The provisions of (d)(5) shall not apply to wood-based fuel intended for the cooking, smoking, or flavoring of food.

(7) The provisions of subdivision (e) shall not apply under the following circumstances:

(A) Residential or commercial properties where a wood-burning device is the sole source of heat; or

(B) A low income household; or

(C) Residential or commercial properties where there is no existing infrastructure for natural gas service within 150 feet of the property line; or

(D) Residential or commercial properties located 3,000 or more feet above mean sea level; or

(E) Ceremonial fires exempted under Rule 444 - Open Burning.

(g) Administrative Requirements

The Executive Officer will provide public notice of a mandatory winter burning curtailment through one or more of the following methods:

(1) A recorded telephone message;

(2) Messages posted on the South Coast Air Quality Management District web site;

(3) Electronic mail messages to persons or entities that have requested such notice;

(4) Notifying broadcast and print media operating within the boundaries of the South Coast Air Basin; and

(5) Any additional method that the Executive Officer determines is appropriate.

~~(h) Penalties~~

~~Any person that violates the provisions of subdivision (e) is subject to the following:~~

~~(1) For first time violators during each wood burning season, completion of a wood smoke awareness course that has been approved by the Executive Officer or payment of a penalty of $50;~~

~~(2) For second time violators during each wood burning season, payment of a penalty of $150 or submission of proof of installation of a dedicated gaseous-fueled fireplace within 90 days after receiving the Notice of Violation; and~~

~~(3) For third time violators during each wood burning season, payment of a penalty of $500 or implementation of an environmentally beneficial project as derived through the mutual settlement process.~~

(i) Severability

If any provision of this rule is held by judicial order to be invalid, or invalid or inapplicable to any person or circumstance, such order shall not affect the validity of the remainder of this rule, or the validity or applicability of such provision to other persons or circumstances.

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

(Adopted January 9, 1976)(Amended September 3, 1976)(Amended February 4, 1977)
(Amended November 18, 1977)(Amended February 3, 1978)(Amended January 5, 1979)
(Amended May 4, 1979)(Amended December 7, 1979)(Amended January 16, 1981)
(Amended October 15, 1982)(Amended November 1, 1985)(Amended March 4, 1988)
(Amended July 7, 1989)(Amended September 8, 1995)(Amended April 21, 2000)
(Amended June 15, 2001)(Amended January 9, 2004)(Amended June 3, 2005)
(Amended March 7, 2008)(Amended April 6, 2012)

RULE 461 - GASOLINE TRANSFER AND DISPENSING

(a) Applicability

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 is 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), dispensing nozzle(s) or other equipment with different characteristics or descriptions from those specified on the existing permit.

(2) BACKFILLING is the covering of the underground storage tank, piping or any associated components with soil, aggregate or other materials prior to laying the finished surface.

(3) BELLOWS-LESS NOZZLE is any nozzle that incorporates an aspirator or vacuum 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.

(4) BREAKAWAY COUPLING is a component attached to the coaxial hose, which allows the safe separation of the hose from the dispenser or the hose from the nozzle in the event of a forced removal such as in the case of a "drive-off."

(5) CARB CERTIFIED or certified by CARB means a Phase I or Phase II vapor recovery system, equipment, or any component thereof, for which

the California Air Resources Board (CARB) has evaluated its performance and issued a valid Executive Order pursuant to Health and Safety Code Section 41954. Each component of a system is a separate CARB certified item and cannot be replaced with a non-certified item or other items that are not certified for use with the particular system. Except for qualified repairs, a CARB certified component shall be as supplied by the qualified manufacturer. A rebuilt component shall not be deemed as CARB certified unless the person who rebuilds the component is authorized by CARB to rebuild the designated CARB certified component.

(6) CLEARLY AND PERMANENTLY MARKED means an identification of the qualified manufacturer's name, model number, and other required information on a vapor recovery system component that is legible, and the identification is either directly stamped on or attached to the component using methods or materials that would endure constant long term use.

(7) COAXIAL FILL TUBE is a submerged fill tube that contains two passages one within the other. The center passage transfers gasoline liquid to the storage tank and the outer passage carries the gasoline vapors to the tank truck, trailer or railroad tank car.

(8) COAXIAL HOSE is a hose that contains two passages one within the other. 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.

(9) DISPENSER is a gasoline dispensing unit used for housing the aboveground gasoline and vapor recovery piping, the gasoline meters, and to hang gasoline-dispensing nozzles when they are not in use for fueling.

(10) DRY BREAK or poppetted dry break is a Phase I vapor recovery component 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 and sealed.

(11) DUAL-POINT DESIGN is a type of Phase I vapor recovery system that delivers gasoline liquid into storage tanks and recovers the displaced vapors through two separate openings on the tank.

(12) ENHANCED VAPOR RECOVERY (EVR) means 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.

(13) FUELING POSITION is a fuel dispensing unit consisting of nozzle(s) and meter(s) with the capability to deliver only one fuel product at one time.

(14) GASOLINE is 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.

(15) GASOLINE TRANSFER AND DISPENSING FACILITY is a mobile system or a stationary facility, consisting of one or more storage tanks and associated equipment, which receive, store, and dispense gasoline.

(16) GASOLINE VAPORS are the organic compounds in vapor form displaced during gasoline transfer and dispensing operations, and includes entrained liquid gasoline.

(17) INSERTION INTERLOCK MECHANISM is 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.

(18) INSTALLER/CONTRACTOR is a person(s) engaged in the installation of new or alterations of existing vapor recovery systems and components at a gasoline dispensing facility.

(19) LIQUID REMOVAL DEVICE is a device designed specifically to remove trapped liquid from the vapor passages of a coaxial hose.

(20) LIQUID TIGHT is a liquid leak rate not exceeding three drops per minute.

(21) MAJOR DEFECT is a defect in the vapor recovery system or its component, as listed in California Code of Regulations, Title 17, Part III, Chapter 1, Subchapter 8, Section 94006.

(22) MINOR DEFECT is a defect in any gasoline transfer and dispensing equipment, which renders the equipment out of good working order but which does not constitute a major defect.

(23) MOBILE FUELER is any tank truck or trailer that is used to transport and dispense gasoline from an onboard storage tank into any motor vehicle fuel tank.

(24) MOTOR VEHICLE is any self-propelled vehicle as defined in Section 415 of the California Vehicle Code.

(25) OWNER/OPERATOR is any person who owns, leases, or operates a gasoline transfer and dispensing facility.

(26) PERFORMANCE TEST is the first test or series of tests performed on a new or altered CARB certified gasoline vapor recovery system to

demonstrate compliance with the CARB Executive Order and District permit conditions upon completion of construction or alteration of the vapor recovery system.

(27) PRESSURE/VACUUM RELIEF VALVE is 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.

(28) QUALIFIED MANUFACTURER is the original equipment manufacturer of the CARB certified vapor recovery system or component, or a rebuilder who is authorized by CARB to rebuild the designated CARB certified component.

(29) QUALIFIED REPAIR is a repair or maintenance of the gasoline transfer and dispensing equipment or vapor recovery system component that would restore the function or performance of such equipment/component following the qualified manufacturer's instructions and using only the applicable CARB certified parts supplied by the qualified manufacturer. Unless otherwise authorized by CARB, a repair or maintenance shall not be considered a qualified repair if the action changes the size, shape or materials of construction of any gasoline vapor passage, or if it may otherwise obstruct, hinder, or reduce the recovery of gasoline vapors during operation.

(30) REBUILD is 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.

(31) RETAIL GASOLINE TRANSFER AND DISPENSING FACILITY is any gasoline transfer and dispensing facility subject to the payment of California sales tax for the sale of gasoline to the public.

(32) RE-VERIFICATION TEST is a test or series of tests performed subsequent to the performance test on a CARB certified gasoline vapor recovery system to demonstrate compliance with the CARB Executive Order and District permit conditions.

(33) SPILL BOX is 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.

(34) SUBMERGED FILL TUBE is any storage tank fill tube with the highest level of the discharge opening 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.

(35) VAPOR CHECK VALVE is 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.

(36) VAPOR RECOVERY SYSTEM is a system installed at a gasoline transfer and dispensing facility for collection and recovery of gasoline vapors displaced or emitted from the stationary storage tanks or mobile fuelers (Phase I) and during refueling of vehicle fuel tanks (Phase II). A Phase II vapor recovery system may be a balance system, which operates on the principle of vapor displacement, a vacuum-assist system, which uses a mechanical vacuum-producing device to create a vacuum, or an aspirator-assist system, which uses an aspirator or eductor to create a vacuum during gasoline dispensing to capture gasoline vapors.

(37) VAPOR TIGHT means the detection of less than 10,000 ppm hydrocarbon concentration, as determined by EPA Method 21, using an appropriate analyzer calibrated with methane.

(c) Equipment and Operation Requirements

(1) Gasoline Transfer into Stationary Storage Tanks and Mobile Fuelers (Phase I)

A person shall not transfer, allow the transfer, or provide equipment for the transfer of gasoline from any tank truck, or trailer 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) Underground storage tanks are equipped with a "CARB certified" enhanced vapor recovery system having a minimum volumetric efficiency of 98% and an emission factor not exceeding 0.15 pounds per 1,000 gallons. The vapor recovery system shall be

maintained and operated according to the manufacturer's specifications and the applicable CARB Executive Orders including the corresponding CARB approved Installation, Operation and Maintenance Manual and shall meet all of the following:

(i) All fill tubes are equipped with vapor tight caps;

(ii) All dry breaks are equipped with vapor tight seals and vapor tight caps;

(iii) The fill tube assembly, including fill tube, fittings and gaskets, is maintained to prevent vapor leakage from any portion of the vapor recovery system;

(iv) Each vapor tight cap is in a closed position except when the fill tube or dry break it serves is actively in use; and

(v) A "CARB certified" spill box shall be installed and maintained free of standing liquid, debris and other foreign matter. The spill box shall be equipped with an integral drain valve or other devices that are certified by CARB to return spilled gasoline to the underground stationary storage tank. The drain valve shall be maintained closed and free of vapor emissions at all times except when the valve is actively in use.

(B) Aboveground Storage Tanks are equipped with a "CARB certified" vapor recovery system having a minimum volumetric efficiency of 95% and is maintained and operated according to the manufacturer's specifications and the applicable CARB Executive Orders including the corresponding CARB approved Installation, Operation and Maintenance Manual and shall meet all of the following:

(i) All fill tubes are equipped with vapor tight caps;

(ii) All dry breaks are equipped with vapor tight seals and vapor tight caps;

(iii) All CARB certified coaxial fill tubes are spring-loaded and operated so that the vapor passage from the stationary storage tank or the mobile fueler back to the tank truck trailer 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;

(v) All vapor return lines without dry breaks are equipped with vapor tight caps; and

(vi) Each vapor tight cap is in a closed position except when the fill tube or dry break it serves is actively in use.

(C) Mobile fueler tanks are equipped with a "CARB certified" vapor recovery system having a minimum volumetric efficiency of 95% and is maintained and operated according to the manufacturer's specifications and the applicable CARB Executive Orders and shall meet all of the following:

(i) The capacity of a cargo tank or tank compartment shall not be greater than 5,000 gallons;

(ii) Each tank or tank component shall be equipped with an overfill protection device which shall be designed to automatically close valves or shut down pumps to stop the transfer of gasoline; and

(iii) The cargo tank dome hatch shall remain closed and latched at all times. It shall not be opened for the purpose of routine tank gauging operations. It may only be opened to accomplish inspections which are necessary due to equipment failures, scheduled maintenance and repairs.

(D) A person shall not operate, or allow the operation of a gasoline delivery tank truck/trailer, unless it is "CARB certified" and maintained in compliance with the certification requirements and shall meet all of the following:

(i) Each gasoline delivery elbow is equipped with sight windows;

(ii) The fuel delivery lines shall be maintained liquid tight, vapor tight, and free of air ingestion. A fuel delivery that is free of air ingestion is determined by observing the fuel stream as clear and free of air bubbles through the sight windows on the delivery system, except during the initial and final 60 seconds of fuel transferring;

(iii) All vapor return lines are connected between the delivery 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; and

(iv) The hatch on any tank truck/trailer shall be equipped with a vapor tight cover during gasoline transfer and pumping. The hatch shall not be opened except for visual inspection, which may be performed after at least three minutes following the completion of the gasoline transfer or pumping. Except otherwise specified by CARB, visual inspection shall be completed in three minutes or less.

(2) Gasoline Transfer into Vehicle Fuel Tanks (Phase II)

A person shall not transfer, or allow the transfer, or provide equipment for the transfer of gasoline from a 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 into any mobile fueler tank 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 as capable of recovering or processing displaced gasoline vapors by at least 95%, or having an emission factor not exceeding 0.38 pounds per 1,000 gallons, as applicable;

(B) The vapor recovery system and associated components are operated and maintained in a manner in accordance with the manufacturer's specifications and the applicable CARB certification including the corresponding CARB approved Installation, Operation and Maintenance Manual;

(C) The system and associated components shall be maintained vapor tight and liquid tight at all times;

(D) Each balance-system nozzle is equipped with a "CARB certified" insertion interlock mechanism and a CARB certified vapor check valve which shall be located in the nozzle;

(E) Each gasoline-dispensing nozzle is equipped with a coaxial hose as specified in the applicable CARB Executive Order;

(F) 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

(G) 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 (e)(6) 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 affected equipment shall be tested in accordance to applicable test methods as specified in the applicable CARB Executive Orders and the corresponding CARB approved Installation, Operation and Maintenance manual 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) For a breakdown (as defined in Rules 102 and 430) of a central vapor incineration or processing unit, the provisions of Rule 430 shall apply. "End of Cycle" as that term is used in Rule 430 shall be deemed to mean the completion of fueling by the last customer who was fueling at the time of the breakdown for the application of Rule 430 in subparagraph (c)(3)(B).

(C) Any Installer/Contractor shall not install, alter, repair or replace a Phase I or Phase II enhanced vapor recovery system or any component thereof without first successfully obtaining the manufacturer's certification and successfully completed any relevant state certification program, through the International Code Council (ICC), or any equivalent state certification program required for the installation and alteration of a vapor recovery system. The requirement for obtaining relevant certification shall take effect six months after such test becomes available.

(D) The owner/operator of an enhanced vapor recovery system or their direct employees are not considered installers/contractors when replacing any defective nozzles, hoses and breakaways with new or CARB certified re-manufactured components of the same make and model, or alternative(s) specifically identified in the latest applicable CARB Executive Order, provided that person successfully obtained the manufacturer's certification and has successfully completed any relevant state certification program, through the International Code Council (ICC), or any equivalent state certification program required for the replacement of components. The requirement for obtaining relevant certification shall take effect six months after such test becomes available.

(E) A person shall not perform or allow the "pump-out" (bulk transfer) of gasoline from a storage tank subject to paragraph (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.

(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 such tank complies with Rule 463 or complies with the following:

(i) The tank is equipped with a Phase I vapor recovery system; and

(ii) The tank is operated and maintained with an integral vapor-tight drain valve to return spilled gasoline to the storage tank, if the tank is equipped with a spill container except for mobile fuelers.

(G) The owner/operator shall conspicuously post the District-required signs specified in Attachment A of this rule in the immediate gasoline dispensing area.

(H) For a dispenser that is not intended to be used to fuel motor vehicles, the owner/operator shall have a sign posted on it to that effect.

(I) 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.

(J) A person shall not store gasoline in open container(s) of any size or handle gasoline in any manner (spillage, spraying, etc.) that allows gasoline liquid or gasoline vapors to enter the atmosphere, contaminate the ground, or the sewer.

(K) The failure of an owner/operator to meet any requirements of subdivision (c) of this rule shall constitute a violation. Such non-compliant equipment shall be tagged "Out of Order".

(L) Except during active repair activity, the "Out of Order" tag specified in subparagraph (c)(3)(K) shall not be removed and the non-compliant equipment shall not be used, allowed 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; and

(ii) The non-compliant equipment has been reinspected and/or the repair has been reported to the Executive Officer or his designee.

(M) The owner/operator shall repair or replace any vapor recovery component having minor defects within seven days, pursuant to Section 41960.2(e) of the California Health and Safety Codes.

(N) The owner/operator and/or the installer/contractor shall have all underground storage tank installations and associated piping configuration inspected by the Executive Officer or his designee prior to backfilling, to verify that all underground equipment is

properly installed in accordance with the requirements specified in the applicable CARB Executive Order. The owner/operator and/or installer/contractor shall schedule a time for inspection with the District by District-approved method and obtain a confirmation number at least three days (at least one of the days shall be regular District business days) prior to the backfilling. At or before the scheduled time of inspection, the owner/operator and/or installer/contractor shall ensure that all underground storage tank installation and associated piping meet all requirements under the applicable CARB Executive Order including the corresponding Installation, Operation and Maintenance Manual and shall be in a state ready to be backfilled. After successfully passing the verification inspection, all underground piping shall be backfilled without being disturbed.

(O) The owner/operator of any gasoline transfer and dispensing facility shall implement a maintenance program and document the program in an operation and maintenance (O&M) manual for the vapor recovery system. The O&M manual shall be kept at the facility and made available to any person who operates, inspects, maintains, repairs, or tests the equipment at the facility as well as the Executive Officer upon request. The O&M manual shall contain detailed instructions that ensure proper operation and maintenance of the vapor recovery system and its components in compliance with all applicable rules and regulations. The O&M manual shall reference all manufacturer required maintenance cycles as delineated in the CARB Executive Order that certified the system. The manual shall, at a minimum, include the following current information:

(i) All applicable CARB Executive Orders, Approval Letters, and District Permits.

(ii) The manufacturer's specifications and instructions for installation, operation, repair and maintenance required pursuant to CARB Certification Procedure CP-201, and any additional instructions provided by the manufacturer.

(iii) System and/or component testing requirements, including test schedules and passing criteria for each of the standard

tests listed under subdivision (f). The owner/operator may include any non-CARB required diagnostic and other tests as part of the testing requirements.

(iv) Additional O&M instructions, if any, that are designed to ensure compliance with the applicable rules, regulations, CARB Executive Orders and District permit conditions, including replacement schedules for failure or wear prone components.

(P) Equipment subject to paragraph (c)(1) or (c)(2) is operated and maintained with no major defect.

(Q) The owner/operator of any gasoline transfer and dispensing facility shall submit the facility's monthly gasoline throughput data for the previous calendar year to the Executive Officer on or before March 1 following each calendar year.

(4) In lieu of compliance with paragraph (c)(2), the owner/operator of a non-retail gasoline dispensing facility may elect to comply with all of the following:

(A) Use hoses, breakaways, and nozzles that are part of a "CARB certified" vapor recovery system, except that the vapor return line shall be sealed off; and

(B) Submit an application for a permit to construct and operate the gasoline dispensing equipment and agree to comply with the following permit conditions:

(i) No fuel shall be dispensed into a vehicle that is not owned or under direct control of the operator, except for a vehicle used in responding to an emergency;

(ii) No fuel shall be dispensed into a vehicle not equipped with an onboard refueling vapor recovery (ORVR) system, except for vehicles used in responding to an emergency; and

(iii) Maintain records of the date and quantity of fuel dispensed by vehicle, and the make, model, model year, and vehicle identification number of all vehicle(s) refueled at the facility. Such records shall be maintained at the facility for at least five years and shall be made available to the Executive Officer upon request.

(d) Self-Compliance Program Requirements

The owner/operator of any retail gasoline transfer and dispensing facility shall implement a self-compliance program as follows:

(1) The self-compliance program shall include the following elements:

(A) Daily 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.

(B) 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.

(C) Maintenance schedules consistent with the applicable Phase I and Phase II vapor recovery systems and components installed at the gasoline transfer and dispensing facility.

(D) A procedure to determine and record the next required test date based on throughput during the 12 months preceding the time of a successful test.

(E) An employee training program including the following:

(i) Itemized training procedures for employees responsible for conducting any part of the self-compliance program.

(ii) A training schedule to periodically train any employee responsible for conducting any part of the self-compliance program.

(iii) A record for each employee of the dates of training provided and the next training date.

(iv) 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.

(2) Any equipment with major defect(s) which are identified during the daily maintenance inspections or periodic compliance inspections shall be removed from service, repaired, brought into compliance, and duly entered into the repair logs required under paragraph (e)(6) before being returned to service.

(3) Defects discovered during self inspection and repaired shall not constitute a violation of Rule 461.

(4) Training and Certification

(A) A person shall not conduct daily maintenance inspections specified in subparagraph (d)(1)(A) or do required recordkeeping unless such person has completed an appropriate District-approved training program.

(B) A person shall not conduct periodic compliance inspections specified in subparagraph (d)(1)(B) or do required recordkeeping unless such person has completed an appropriate District-approved training program in the inspection and maintenance of vapor recovery systems and has received a certification issued by the District.

(e) Testing, Reporting and Recordkeeping Requirements

(1) Within 10 calendar days after initial operation of dispensing 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 subdivision (f), and any additional tests required by the applicable CARB Executive Orders including the corresponding CARB approved Installation, Operation and Maintenance Manual 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 subparagraphs (e)(3)(D) and (e)(3)(E).

(2) The owner/operator shall conduct and successfully pass the reverification tests in accordance with the test methods specified in subdivision (f), and any additional tests required by the applicable CARB Executive Orders including the corresponding CARB approved Installation, Operation and Maintenance Manual or District Permits, to verify the proper operation of the vapor recovery systems. Test results shall be submitted as stated in subparagraphs (e)(3)(D) and (e)(3)(E).

(A) The reverification tests at retail gasoline transfer and dispensing facilities shall be conducted no less frequently than as scheduled below, based on the facility's maximum monthly gasoline

throughput during the 12-month period immediately preceding the required test:

(i) The owner/operator of a facility with a maximum monthly throughput of 100,000 gallons or greater shall complete the reverification tests semiannually.

(ii) The owner/operator of a facility with a maximum monthly throughput less than 100,000 gallons shall complete the reverification tests annually.

(iii) The owner/operator of a facility with less than 12 months throughput data shall conduct reverification tests semiannually. In case of a change of operator of a facility, throughput under the previous owner/operator may be used to determine the applicable test frequency.

(B) The owner/operator of a non-retail gasoline transfer and dispensing facility shall complete the reverification tests annually.

(C) Once a facility reverification testing month(s) are established, subsequent reverification testing shall be conducted during the same months each year. When a new performance test schedule is required due to a facility alteration, new reverification testing months shall be established based on the date of the performance tests.

(D) In case of a change of operator, the new operator shall conduct the next reverification test on the same testing month as established by the previous operator, if the previous reverification testing records are available. When no testing records are available, the new operator shall complete all the applicable reverification testing within 30 calendar days of the change of operator.

(3) A person who conducts performance or reverification tests shall comply with all of the following:

(A) Conduct performance or reverification tests in accordance with the applicable test methods listed in subdivision (f) and other CARB testing procedures. Tests shall be conducted using calibrated equipment meeting the calibration range and calibration intervals specified by the manufacturer.

(B) Notify the District and obtain a confirmation number at least three days prior to testing (at least one of the days shall be regular

District business days), except as specified in paragraph (e)(4). In the event that a performance test or reverification 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 subparagraph shall be provided by electronic mail or other District approved methods. Notwithstanding, the three-day notice may not be required for reverification tests conducted after a drive-off pursuant to clause (c)(2)(G)(i), provided that the person conducting the tests complies with all other applicable provisions of the rule.

(C) Conduct performance and reverification tests between the hours of 7:00 a.m. and 8:00 p.m. Monday through Friday. Notwithstanding, the Executive Officer may approve testing on a weekend day (Saturday or Sunday) based on the following criteria:

(i) The District shall approve a limited number of reverification testing requests per weekend on a first-come-first-served basis. These reverification tests are subject to the following restrictions:

(I) The person conducting the tests has notified the District pursuant to subparagraph (e)(3)(B) for reverification tests. The requests shall be made no more than 30 calendar days in advance of the testing.

(II) Tests shall be conducted from 7:00 a.m. through 5:30 p.m.

(III) Upon request by the Executive Officer, the person who conducted the tests on a weekend day for which the District staff was not present shall repeat the reverification testing at a mutually acceptable date but no later than 10 calendar days from the day the test was conducted. The GDF shall pay the cost of the repeat reverification testing.

(ii) The District shall approve all requests for a retest on a weekend day provided that the retest meets the following conditions:

(I) The retest on a weekend day is necessary as the repairs and retest following a failed reverification test cannot be completed by Friday.

(II) The person conducting the test has notified the District pursuant to subparagraph (e)(4)(A) or left a phone notification before midnight of the day before the retest.

(III) Tests shall be conducted from 7:00 a.m. through 5:30 p.m.

(IV) Upon request by the Executive Officer, the person who conducted the test on a weekend day for which the District staff was not present shall repeat the reverification testing at a mutually acceptable date but no later than 10 calendar days from the day the test was conducted. The GDF shall pay the cost of the repeat reverification testing.

(D) Submit a copy of the PASS/FAIL test results electronically in a District approved format to the Executive Officer within 72 hours after each test is conducted. The PASS/FAIL test results are a summary of the overall results of each test.

(E) Submit the final test report demonstrating compliance within 14 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 AQMD facility ID number of the location being tested, the equipment Permit to Operate or Application number, the AQMD ID number of the company performing the tests, a statement whether the system or component tested meets the required standards, and the name, AQMD tester ID number and signature of the person responsible for conducting the tests.

(F) Successfully completed the District's Tester Orientation class.

(G) Successfully completed the International Code Council (ICC) tester certifications (or equivalent state certifications) examination during the previous 24 months. This provision shall take effect six months after such a test becomes available.

(H) Successfully re-completed the District's Tester Orientation class after having been cited within any 6-month period for at least two

violations of subparagraph (e)(3)(A) of this rule or CARB vapor recovery regulations in such a manner that the violations could have affected the accuracy of a performance or reverification test. The tester shall cease conducting any performance or reverification test after receiving the second notice of violation until such time that the tester has successfully re-completed the District Tester Orientation class.

(I) Not committed more than three violations of subparagraph (e)(3)(A) of this rule or CARB vapor recovery regulations in such a manner that the violations could have affected the accuracy of a performance or reverification test during any 12-month period.

(4) Notwithstanding subparagraph (e)(3)(B), the owner/operator of a gasoline transfer and dispensing facility that has failed a reverification test or portions thereof may retest the facility prior to resuming operation provided that the person conducting the tests has complied with one of the following:

(A) Notify the District by telephone or other District approved methods and obtain a confirmation number at least 12 hours prior to retesting (at least six of the hours shall be regular District business hours); or

(B) When all necessary repairs are performed during the same day the facility has failed any of the applicable reverification tests, the owner/operator may retest the facility on the same day without re-notification, provided that the reasons for the test failure and any repairs performed are properly documented in the test reports and the repair logs pursuant to subparagraphs (e)(6)(B) and (e)(6)(C).

(5) 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 reverification tests. Notwithstanding the above, when a dispenser associated with any equipment that has failed a reverification 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 Executive Officer pursuant to subparagraphs (e)(6)(C), (e)(3)(D) and (e)(3)(E).

(6) 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, reverification 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 years (or five 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 Executive Officer. All records shall be made available to the Executive Officer upon request both on site during inspections and offsite as specified.

(A) Records of all components installed, defective components identified or repaired during self-compliance inspections.

(B) Repair logs, which shall include:

(i) Date and time of each repair.

(ii) The name of the person(s) who performed the repair, and, if applicable, the name, address and phone number of the person's employer.

(iii) Description of service performed.

(iv) Each component that was installed, repaired, serviced, or removed, including the required component identification information pursuant to subparagraph (c)(3)(A).

(v) Each component that was installed as replacement, if applicable, including the required component identification information pursuant to subparagraph (c)(3)(A).

(vi) 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.

(C) Records of tests, which shall include:

(i) Date and time of each test.

(ii) District confirmation number of notifications.

(iii) Name, affiliation, address and phone number of the person(s) who performed the test.

(iv) Test data and calibration data for all equipment used.

(v) 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.

(vi) For a retest following a failed performance or reverification test, description of repairs performed pursuant to subparagraph (e)(4)(B).

(vii) Copies of test reports in District approved format.

(D) Monthly gasoline throughput records.

(E) Records to prove that the installer/contractor that installed or altered the Enhanced Vapor Recovery 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 subparagraph (c)(3)(A).

(f) Performance and Reverification Test Methods

All required tests shall be conducted in accordance with the most recently CARB approved version of CARB test methods or as stated in the applicable CARB Executive Orders including the corresponding Installation, Operation and Maintenance Manual test procedures or any other test methods approved in writing by the USEPA, CARB, or the District.

(g) Exemptions

(1) The provisions of this rule shall not apply to the transfer of gasoline into testing equipment used to verify the efficiency of the vapor recovery system by CARB or the District or testing contractors, the accuracy of the gasoline dispensing equipment by the Department of Weight and Measures, and the fire safety standards by the Fire Department.

(2) The requirements of paragraph (c)(2) shall not apply to the fueling of Tournament of Roses parade floats.

(3) For the purposes of this rule, any requirement for equipment or component(s) to be CARB certified where an applicable valid Executive Order has not been issued by CARB shall not apply until an applicable Executive Order becomes effective.

(h) Rule 1402 Inventory Requirements

A retail gasoline transfer and dispensing facility that is in compliance with all applicable provisions of this rule, CARB Executive Orders, and District permit conditions shall not be required to submit an emission inventory to the Executive Officer, pursuant to subparagraph (n)(1)(B) of Rule 1402 - Control of Toxic Air Contaminants from Existing Sources, and is deemed in compliance with the requirements of Rule 1402, unless the facility exceeds the significant risk level as defined in Rule 1402.

ATTACHMENT A

AQMD-REQUIRED SIGNS

I. The operator shall post nozzle operating instructions and the following signs:

(A) SCAQMD toll-free telephone number: "If you have nozzle problems, please call the Air Quality Management District at the toll-free number (800) 242-4020;" or equivalent information approved in writing by the Executive Officer; and

(B) A "warning" stating:

"TOXIC RISK - FOR YOUR OWN PROTECTION
DO NOT BREATHE FUMES
DO NOT TOP TANKS"

II. All required signs shall conform to all of the following:

(A) For decal signs:

(i) Each sign shall be visible from all fueling positions it serves; and

(ii) Sign shall be readable from a distance of 3 feet.

(B) All other signs:

(i) For pump toppers, one double-back sign per island;

(ii) For permanent (non-decal) signs, two single-sided or one double-sided sign(s) per two (2) dispensers.

(iii) All signs shall be readable from a distance of 6 feet.

ATTACHMENT B

DAILY MAINTENANCE INSPECTION PROTOCOL

The owner/operator of a retail gasoline transfer and dispensing facility shall at minimum verify the following during the daily 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.

ATTACHMENT C - CONTINUED

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.

ATTACHMENT C – CONTINUED

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.

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

(Adopted Jan. 9, 1976)(Amended May 5, 1978)(Amended Oct. 14, 1979)
(Amended April 4, 1986)(Amended December 7, 1990)(Amended June 9, 1995)
(Amended May 14, 1999)

RULE 462. ORGANIC LIQUID LOADING

(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 as defined in Rule 102.

(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 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 Vapor Recovery Test Procedure TP-204.3 – Determination of Leak(s).

(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) Each Class A facility shall be equipped with

(i) a CARB certified vapor recovery and/or disposal system, or;

(ii) a District-approved vapor recovery and/or disposal system only when such system does not

require CARB certification pursuant to Health and Safety Code 41954.

(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) Each vapor recovery and/or disposal 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.

(G) The backpressure in the vapor recovery and/or disposal system shall not exceed 18 inches of water column pressure.

(2) Loading Requirements at Class B Facilities

(A) Each Class B facility shall be equipped with

(i) a CARB certified vapor recovery and/or disposal system, or;

(ii) a District-approved vapor recovery and/or disposal system only when such system does not require CARB certification pursuant to Health and Safety Code 41954.

(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 column 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).

(B) Transport vessel vapor leaks from dome covers, pressure vacuum vents or other sources shall be determined in accordance with the CARB Vapor Recovery Test Procedure TP-204.3 – Determination of

Leak(s).

(C) The transport vessel shall be operated so that there are no transport vessel vapor leaks or 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) CARB Certification or District Approval

(i) Any vapor recovery and/or disposal system subject to clause (d)(1)(A)(i) shall meet the following requirements:

(I) By February 1, 1999, the existing or modified vapor recovery and/or disposal system shall be CARB-certified.

(II) No later than 180 calendar days after completion of construction, any vapor recovery and/or disposal system installed after May 14, 1999 shall be CARB-certified, or;

(ii) By December 31, 1999 or 180 calendar days after completing construction, whichever is later, the vapor recovery and/or disposal system subject to Clause (d)(1)(A)(ii) shall be District approved.

(2) For Class B facilities subject to paragraph (d)(2):

(A) Any vapor recovery and/or disposal system subject to clause (d)(2)(A)(i) shall meet the following requirements:

(i) By February 1, 1999, the existing or modified vapor recovery and/or disposal system shall be CARB-certified.

(ii) No later than 180 calendar days after completion of construction, any vapor recovery and/or disposal system installed after May 14, 1999 shall be CARB-certified, or;

(B) By December 31, 1999 or 180 calendar days after completion of construction, whichever is later, the vapor recovery and/or disposal system subject to clause (d)(2)(A)(ii) shall be District-approved.

(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) CARB Certification or District Approval

(i) Any vapor recovery and/or disposal system subject to clause (d)(2)(A)(i) shall meet the following requirements:

(I) By February 1, 1999, the existing or modified vapor recovery and/or disposal system shall be CARB-certified.

(II) No later than 180 calendar days after completion of construction, any vapor recovery and/or disposal system installed after May 14, 1999 shall be CARB-certified, or;

(ii) By December 31, 1999 or 180 calendar days after completion of construction, whichever is later, the vapor recovery and/or disposal system subject to clause (d)(2)(A)(ii) shall be District-approved.

(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, as applicable.

(2) Continuous Monitoring System required pursuant to subparagraph (d)(1)(B) shall be in compliance with Code of Federal Regulations Title 40 Part 63 Subpart R Section 63.427 and Code of Federal Regulations Title 40 Part 60 Appendix B, as applicable.

(3) Compliance with the vapor recovery efficiency as specified in the subparagraph (d)(2)(B) shall be determined according to the CARB Vapor Recovery Certification Procedure CP-202 – Certification Procedure for Vapor Recovery Systems of Bulk Plants or, for the vapor recovery and/or disposal system subject to Clause (d)(2)(A)(ii), the SCAQMD Approval Procedure for Vapor Recovery Systems of Bulk Plants dated May 14, 1999.

(4) Determinations of facility vapor leaks as defined in the paragraph (b)(7) shall be conducted according to EPA

Method 21.

(5) Compliance with the requirements of District approval for vapor recovery and/or disposal systems as specified in subparagraphs (d)(1)(A) and (d)(2)(A) shall be determined according to the District Approval Procedure for Vapor Recovery Systems for Bulk Plants dated May 14, 1999. All testing required in the District Approval Procedure for Vapor Recovery and/or Disposal System shall be conducted by testing firms/laboratories that have been approved by the District for the specific tests under the Laboratory Approval Program.

(6) Any other alternative test method approved in writing by the District, CARB, and EPA may be used only when none of the test methods identified in this subdivision are applicable.

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

(g) Recordkeeping

(1) The owner and operator of any Class A, B, or C facility, in order to verify 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. A log showing daily compliance shall suffice to satisfy this requirement.

(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.

(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.

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

(Adopted August 15, 1977)(Amended June 1, 1984)(Amended December 7, 1990)
(Amended March 11, 1994)(Amended May 6, 2005)
(Amended November 4, 2011)

RULE 463. ORGANIC LIQUID STORAGE

(a) Purpose and Applicability

The purpose of this rule is to reduce emissions of volatile organic compounds (VOC) from the storage of organic liquids in stationary above-ground tanks. 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) ACTUAL STORAGE CONDITIONS means the temperature at which a product is stored in an above ground stationary tank.

(2) AMBIENT TEMPERATURE is the temperature of an organic liquid within a storage tank that has been influenced by atmospheric conditions only and is not elevated by a non-atmospheric means of heating at the tank which includes but is not limited to steam, hot water, heaters, heat exchangers, tank insulation, or tank jacketing.

(3) CERTIFIED PERSON is an individual who has successfully completed the District tank self-inspection program, and who holds a certificate issued by the Executive Officer evidencing that such individual is in good standing in this program.

(4) DRAIN-DRY BREAKOUT TANK is an above-ground storage tank designed such that the floating roof rests on support legs no higher than one foot along the tank shell with a bottom sloped to a sump or sumps such that no product or sludge remains on the tank bottom and walls after emptying except clingage and is primarily used to receive product from pipelines and to distribute product back into pipelines.

(5) EXEMPT COMPOUND is as defined in Rule 102.

(6) GASOLINE means any petroleum distillate having a Reid vapor pressure of 200 mm Hg (3.9 pounds per square inch), or greater.

(7) HEAVY CRUDE OIL means a crude oil with American Petroleum Institute (API) gravity 20 degrees or less.

(8) ORGANIC LIQUID is any liquid containing VOC.

(9) PRESSURE RELIEF VALVE (PRV) is a valve which is automatically actuated by upstream static pressure, and used for safety or emergency purposes.

(10) SEAL is a closure device between the tank wall and the floating roof edge that controls emissions of VOCs. 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 VOCs 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 VOCs.

(11) TANK is any stationary above-ground reservoir or any other stationary above-ground container used for storage of an organic liquid.

(12) VAPOR TIGHT is a condition that exists when the reading on a portable hydrocarbon meter is less than 500 parts per million (ppm), expressed as methane, above background.

(13) VOLATILE ORGANIC COMPOUND (VOC) is as defined in Rule 102.

(14) WORKING DAY is Monday through Friday and includes holidays that fall on any of the days Monday through Friday.

(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, or other

vapor control device that has been determined to be equivalent after review by the staffs of the District, the Air Resources Board (ARB), and the United States Environmental Protection Agency (U.S. EPA), and approved in writing by the District Executive Officer, ARB, and U.S. EPA, 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 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.

(ii) 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.

(iii) The secondary seal shall extend from the roof to the tank shell and shall not be attached to the primary seal.

(iv) 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 in a vapor tight condition 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, or vent tank emissions to a fuel gas system.

(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) 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.

(5) 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.

(6) Organic liquids listed on the addendum to this rule shall be deemed to be in compliance with the appropriate vapor pressure limits for the tank in which it is stored provided the actual storage temperature does not exceed the corresponding maximum temperature listed.

(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) Each owner or operator shall maintain a current or revised Inspection and Maintenance Plan approved by the Executive Officer. Each owner or operator constructing floating roof 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 floating roof 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 floating roof 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 floating roof tank identification shall require prior written approval by the Executive Officer.

(3) Owner or Operator Inspection Requirements

(A) All floating roof 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 floating roof 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 floating roof 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.

(f) Reporting and Recordkeeping Requirements

(1) The following shall apply to activities subject to the provisions of subdivision (e):

(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 either electronically or by hard copy 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.

(2) Emissions Reporting

(A) An owner or operator shall provide emissions information, to the Executive Officer upon request, based on the parameters listed in Attachment C using AQMD's Annual Emissions Reporting Program or U.S. EPA's most recent version of TANKS 4.0 Program. The requirement shall apply to all organic liquid storage tanks without regard to exemptions specified in subdivision (g).

(B) An owner or operator shall provide all upset emissions information associated with product change, repair, and turnover or any other excess emission incidents.

(C) An owner or operator shall maintain records of emissions data for all organic liquid storage tanks for the most recent two (2) year period.

(3) A person whose tanks are subject to this rule shall keep an accurate record of liquids stored in such containers, the vapor pressure ranges, the API gravity, the temperature, and the initial boiling points referenced.

(g) Exemptions

(1) 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:

(A) 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:

(i) The organic liquid contents fail to comply with subdivision (c) 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

(ii) 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.

(B) Tanks being brought into compliance within the time period specified in paragraph (e)(4).

(2) The provisions of (d)(2) shall not apply to drain-dry breakout tanks that are subject to the provisions of Rule 1149 - Storage Tank And Pipeline Cleaning And Degassing.

(h) Test Methods

The following test methods and procedures shall be used to determine compliance with this rule. Other test methods determined to be equivalent after review by the staffs of the District, the Air Resources Board, and the U.S. EPA, and approved in writing by the District Executive Officer may also be used.

(1) Efficiency of a vapor recovery system specified in subparagraph (c)(3)(C) shall be determined according to SCAQMD Method 501.1 for the determination of total organic compound emissions. EPA Reference Methods 25 or 25A may be used, as applicable, in place of SCAQMD 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.

(2) Exempt compounds shall be determined according to SCAQMD Method 303. For the purpose of testing the efficiency of a vapor recovery system, exempt compounds shall be determined according to EPA Reference 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 or operator seeking an exemption and shall be subject to approval in accordance with the procedures set forth above in this subdivision.

(3) The Reid vapor pressure specified in paragraph (b)(6) and the Reid vapor pressure used in determining the true vapor pressure limit specified in paragraph (d)(4) shall be determined according to ASTM D-323-82

Vapor Pressure of Petroleum Products (Reid Method) or California Code of Regulations, Title 13, Section 2297, and converted to true vapor pressure using applicable nomographs in U.S. EPA AP-42, Fifth Edition, Volume 1, Chapter 7, or nomographs approved by the Executive Officer and U.S. EPA.

(4) Notwithstanding the provisions of paragraph (h)(3), if a permit condition or District rule requires a demonstration of true vapor pressure of less than 5 mm Hg (0.1 psi) absolute, either of the following test methods may be used:

(A) Organic liquids that are stored at ambient temperatures with a true vapor pressure of greater than 5 mm Hg (0.1 psi) absolute under actual storage conditions shall be determined as those with a flash point of less than 100 °F as determined by ASTM Method D-93 – 10a - Flash Point by Pensky-Martens Closed Cup Tester.

(B) Organic liquids that are stored at above ambient temperatures with a true vapor pressure greater than 5 mm Hg (0.1 psi) absolute under actual storage conditions shall be determined as those whose volume percent evaporated is greater than ten percent at an adjusted temperature T_{Adj} as determined by ASTM Method D-86 – 11a - Distillation of Petroleum Products at Atmospheric Pressure of:

$$T_{Adj} = 300\ °F + T_1 - T_a$$

Where:

T_1 = Liquid Storage Temperature (°F)

T_a = Ambient Temperature (°F) = 70 °F

(5) Notwithstanding the provisions of paragraph (h)(3), the true vapor pressure of crude oils and distillates shall be determined, at actual storage conditions, by converting Reid vapor pressure using the appropriate API nomograph found in U.S. EPA AP-42, Fifth Edition, Volume 1, Chapter 7, or API nomograph found in API Publication 2517, Second Edition, February 1980. The true vapor pressure of crude oils with an API gravity of 26.0 or less, may be measured using the Lawrence Berkeley National Laboratory "Test Method for Vapor Pressure of Reactive Organic

Compounds in Heavy Crude Oil Using Gas Chromatography.", May 28, 2002.

(6) Vapor tight condition specified in subparagraphs (c)(3)(A) and (c)(3)(B) shall be determined according to U.S. EPA's Reference Method 21 using an appropriate analyzer calibrated with methane.

(7) API gravity is determined using the following:

(A) ASTM D-1298-99e2 Standard Test Method for Density, Relative Density (Specific Gravity), or API Gravity of Crude Petroleum Products by Hydrometer Method; or

(B) ASTM D-6822-02 Standard Test Method for Density, Relative Density, and API Gravity of Crude Petroleum and Liquid Petroleum Products by Thermohydrometer Method; or

(C) ASTM D-287-92(2000)e1 Standard Test Method for API Gravity of Crude Petroleum and Petroleum Products (Hydrometer Method).

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

RULE 463 - ADDENDUM

Storage Temperatures Versus Actual Vapor Pressure
(Gravity/Initial Boiling Points Referenced)

	Reference Property A - °API	B - IBP, °F	Temperature, °F Not to Exceed Vapor Pressure	
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	250
Diesel	36.4	372	230	290
Gas Oil	26.2	390	249	310
Stove Oil 23	421	275	340	
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	--

RULE 463 - ADDENDUM (Cont.)

Organic Liquids	Reference Property A - ^{o}API	B - IBP, ^{o}F	Temperature, ^{o}F Not to Exceed Vapor Pressure 0.5 psia	1.5 psia
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

ATTACHMENT A

FLOATING ROOF TANK SEAL CATEGORIES

PRIMARY SEALS

Category A	Category B	Category C
1. Liquid mounted multiple wipers with drip curtain and weight	1. Liquid mounted single wiper with drip curtain and weight	1. Liquid mounted single wiper
2. Liquid mounted mechanical shoe	2. Liquid mounted double foam wipers with vapor curtain	2. Liquid mounted foam log
	3. Vapor mounted primary wiper	3. Liquid mounted foam log with vapor curtain
	4. Vapor mounted E wiper	4. Liquid mounted resilient toroid type liquid filled log
	5. Vapor mounted double wipers	5. Vapor mounted foam log/bag
	6. Vapor mounted double foam wipers	6. Vapor mounted foam wiper
	7. Vapor mounted multiple wipers	

SECONDARY SEALS

Category A	Category B	Category C
1. Multiple wipers	1. Single wiper	1. Liquid mounted wiper
		2. Foam log/bag
		3. 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 floating roof tanks containing organic liquid not subject to the provisions of subdivision (c) of Rule 463, conduct only steps 1 through 3 of this attachment. For all other floating roof tanks, conduct steps 5 through 7 as applicable.

5. 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.

- o 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.

6. For internal floating roof tanks:

   - o 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.
   - o Conduct a visual inspection of the roof openings and the secondary seal, if applicable, and record findings on the report.

7. Complete all necessary calculations and record all required data accordingly on the report.

SOUTH COAST AIR QUALITY MANAGEMENT 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? No ☐ Yes ☐ If yes, Date of Previous Inspection _____

A. COMPANY INFORMATION:

Company Name _____

Location Address _____ City _____ Zip _____

Mailing Address _____ City _____ Zip _____

Contact Person _____ Title _____

Phone _____

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 _____

Type of Tank: Riveted ☐ Welded ☐ Other ☐ (describe) _____

Color of Shell _____ Color of Roof _____

Roof Type: Pontoon ☐ Double Deck ☐ Other(describe) _____

External floating roof ☐ Internal floating roof ☐

D. GROUND LEVEL INSPECTION:

1) Product Temperature _____ ° F 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).

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 gap 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: ☐ Shoe; ☐ Tube; ☐ 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

LEGEND:

Equipment:

☐	Antirotational device
O	Gauge well
⊤	Leg stand
⊗	Roof drain
*	Emergency roof drain
∞	Vacuum breaker
	Vent
	Platform & ladder

Defects:

Θ	Leg top
╫	Leg pin
ơ	Open hatch
\/\	Torn seal
|-P-|	Primary seal gap
|-S-|	Secondary seal gap

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

RULE 463 COMPLIANCE REPORT

PLEASE COMPLETE FORM LEGIBLY IN BLACK INK

Tank No. _____ SCAQMD Permit No. _____

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 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:

1)	Were any openings found on the roof?		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		
		Did cumulative 1/8 - 1/2” gap exceed 60% circumference length?	No ☐	Yes ☐
		Did any <u>single continuous</u> 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 (Both Sheets) TO:

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

21865 Copley Drive

FAX: (909) 396-3341

Diamond Bar, CA 91765
Attn: Rule 463 Program Supervisor

FOR SCAQMD USE ONLY: Date received_____

Reviewed by:_____ Date reviewed_____
(signature) (Certification ID #)

Tank Status: [ ] in compliance [ ] in violation, Rule(s)_____
Comments:_____
_____
_____
_____

DATA REPORTING REQUIREMENT FOR ROOF TANKS

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. Fixed 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.

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

(Adopted May 7, 1976)(Amended September 1, 1978)(Amended April 6, 1979)
(Amended April 4, 1980)(Amended December 7, 1990)

RULE 464. - WASTEWATER SEPARATORS

(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 60°F.
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

$$\frac{A}{f \times V} \text{ to exceed } 420$$

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)

$- 0.000286 \times$ (10% true boiling point, ^{o}F)

$+ 0.00215 \times$ (annual average influent temperature, ^{o}F)

The provisions of subsection (c)(3) shall not apply to coal tar wastewater separators.

(Adopted May 7, 1976)(Amended March 3, 1978)(Amended March 2, 1979)
(Amended April 4, 1980)(Amended December 7, 1990)(Amended November 1, 1991)
(Amended August 13, 1999)

RULE 465. REFINERY VACUUM-PRODUCING DEVICES OR SYSTEMS

(a) Applicability

The provisions of this rule shall apply to all volatile organic compound emissions and sulfur compound emissions from any petroleum refinery vacuum-producing devices or systems, including hot wells and accumulators.

(b) Definitions

(1) **ACCUMULATOR** is a tank or chamber for collecting and temporarily storing a condensed petroleum distillate which is the interim product in a refinery process.

(2) **EXEMPT COMPOUNDS** are as defined in Rule 102.

(3) **HOT WELL** is a chamber for collecting water condensate which is contaminated with the product of a refinery process.

(4) **VACUUM-PRODUCING DEVICE OR SYSTEM** means any device or system which acts to maintain the pressure inside a petroleum refinery process vessel below 14.7 pounds per square inch, absolute.

(5) **VOLATILE ORGANIC COMPOUND (VOC)** is as defined in Rule 102.

(c) Requirements

(1) Hot wells and accumulators shall be equipped with covers.

(2) Exhaust gases from vacuum-producing devices or systems, including hot wells and accumulators, shall be continuously collected and added to a fuel gas system or combustion device that has been approved and issued a permit by the Executive Officer in accordance with all applicable District rules applicable to such a device.

(Adopted November 3, 1978)(Amended June 1, 1979)
(Amended May 2, 1980)

RULE 466.1. VALVES AND FLANGES

(a) Definitions

For the purpose of this rule:

(1) A Valve is defined as any device that regulates the flow of fluid in a piping system by means of an external actuator acting to permit or block passage of fluid including the attached flange and the flange seal.

(2) Commercial Natural Gas is a mixture of gaseous hydrocarbons, chiefly methane, used as a fuel and obtained from a company licensed to dispense such gases.

(3) Background is defined as the ambient concentration of volatile organic compounds determined at least three (3) meters upwind from the valve or flange to be inspected.

(4) Volatile Organic Compounds are compounds of carbon, excluding carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates, ammonium carbonate, ethane, methane, 1,1,1 trichloroethane, methylene chloride and trichlorotrifluoroethane, that have a Reid vapor pressure greater than 80 mm Hg (1-55 pounds per square inch), or an absolute vapor pressure (AVP) greater than 36 mm Hg (0.7 psi) at 2OoC.

(5) A Working Day is any day of the week except Saturday or Sunday or employee holiday.

(6) A Refinery is an establishment that processes petroleum as defined in Standard Industrial Classification Manual as Industry No. 2911 Petroleum Refining.

(7) A Flange is defined as a projecting rim on a pipe or piping component used to attach it to another piping detail.

(8) A Leak is defined as:

(A) The dripping of liquid volatile organic compounds at a rate of more than three drops per minute; or

(B) The detection of gaseous volatile organic compounds in excess of 10,000 ppm above background when measured at the source as hexane with a portable hydrocarbon detection instrument.

(9) A Chemical Plant is any plant producing organic chemicals and/or manufacturing products by organic chemical processes.

(b) Requirements

(1) The operator of a refinery or chemical plant is subject to the provisions of this rule and is responsible for performing the required inspections. Each operator shall, no later than 60 days after the date of adoption of this rule, submit a management plan detailing the component inspection sequence and the schedule for the inspection program to be conducted by the operator at the refinery or chemical plant.

(2) Each valve or flange in a petroleum refinery or chemical plant handling volatile organic compounds shall be inspected in accordance with paragraph (c). Any such valve or flange found to leak shall be repaired in accordance with paragraph (d).

(3) Each valve located at the end of a pipe or line containing volatile organic compounds, shall be sealed with a blind flange, plug, or cap when not in use, except:

(A) A valve on a product sampling line;

(B) A safety pressure relief valve;

(C) A bleeder valve in a double block and bleeder valve system.

(4) Each valve which has been discovered to leak in accordance with the definition of paragraph (a)(8) shall be affixed with a record of inspections for the succeeding twelve-month period. Alternative methods of recordkeeping may be used, including the maintenance of records in a centralized location, provided that prior approval of the Executive Officer has been obtained.

(5) Any valve or flange in excess of one valve or flange per day, found to leak by District personnel within five days after the scheduled inspection of subparagraph (b)(1) shall constitute a violation of this rule if:

(A) the liquid leakage exceeds three drops per minute, or

(B) the measured volatile organic concentration at the source exceeds 75,000 ppm measured at within one centimeter of the source as hexane above background.

(c) Inspection

(1) All valves handling volatile organic compounds shall be inspected for leaks according to-the following schedule:

(A) All valves used in any refinery shall be inspected once between January 1, 1979 and June 30, 1979 and once between July 1, 1979 and December 31, 1979.

(B) All valves used in any chemical plant shall be inspected once between July 1, 1979, and December 31, 1979, and once between January 1, 1980, and June 30, 1980.

(C) After January 1, 1980, all valves used in any refinery shall be inspected annually except as provided in subparagraph (c)(1)(E).

(D) After June 30, 1980, all valves used in any chemical plant shall be inspected annually except as provided in subparagraph (c)(1)(E).

(E) In addition to the annual inspection in subparagraph (c)(1)(C) and (c)(1)(D), each valve found to leak shall be reinspected three months after repair of such leak. Valves found to be leaking at the three months' reinspection shall be repaired and reinspected after 30 days. Valves found to be leaking after the 30 day reinspection shall be repaired and reinspected at intervals of one-half the prior interval, except no valve need be inspected more frequently than once per day.

(2) Process piping flanges shall be inspected annually.

(3) Continuous monitoring flammable gas detection devices which send a visual or audible signal when a leak occurs, may, with the approval of the Executive Officer, be substituted for periodic inspections using leak detection equipment in applicable facilities or parts of facilities.

(d) Repair

(1) Each leaking valve or flange shall be repaired within two working days after detection of such leak, except as provided in subparagraph (d)(2). The repairs will be such that:

(A) There is no dripping of liquid volatile organic compounds at a leakage rate exceeding three drops per minute, or

(B) No concentration of gaseous volatile organic compounds in excess of 10,000 ppm above background are detected when measured at the source with a portable hydrocarbon detection instrument.

(2) If, after repairs are completed, the leak rate is greater than three drops per minute or the detectable gaseous volatile organic compound are 10,000

ppm or greater measured at the source, one of the following actions will be taken:

(A) Emergency repairs shall be made to reduce the emission rate to the rate stated in (a)(8)(A) and (a)(8)(B); or

(B) The emissions from the leak shall be vented into an approved air pollution control device, or (C)@iii) A petition for a variance shall be filed on the next working day.

(3) The persons complying with the provisions of the rule shall be exempt from the provisions of Rule 430 insofar as the provisions of Rule 430 would apply to leaking valves or flanges.

(e) Measurement Requirements

(1) The instruments used for the measurement of gaseous volatile organic compounds shall be equated to calibrating with hexane and sampling at one liter per minute.

(2) Actual measurement of gaseous leakage rates may be conducted within a distance of two inches from the potential source using a concentration versus distance relationship specified by the Executive Officer.

(f) Recordkeeping

Persons subject to this rule shall:

(1) Maintain records of inspections of valves for one year.

(A) With the approval of the Executive Officer, inspection records by operational system or plant area will be adequate to demonstrate compliance with annual inspection requirements.

(B) Annual inspection records for the continuous monitoring equipment described in subparagraph (c)(3) shall not be required, provided that records are maintained for out-of-tolerance conditions as indicated by the monitoring equipment.

(2) Make inspection records available for review to the Executive Officer upon request.

(3) Recordkeeping requirements shall not apply to-the routine periodic inspection of flanges.

(g) Exemptions

(1) The provisions of this rule shall not apply to:

(A) Valves or flanges handling gases in which commercial natural gas is the only volatile organic compound.

(B) All valves or flanges which are located in areas which make inspection infeasible or unsafe for personnel provided that prior concurrence of the Executive Officer has been obtained.

(C) Valves or flanges handling gases with a hydrogen composition of 80 percent or greater.

(D) Valves or flanges regulated by Rule 1005.

(h) Effective Dates

(1) The owner or operator of any refinery shall comply with the requirements of paragraph (b)(3) no later than January 3, 1979.

(2) The owner or operator of any chemical plant shall comply with the requirements of paragraph (b)(3) no later than July 4, 1979.

(3) The owner or operator of any chemical plant or refinery shall comply with the requirements of this rule 60 days from the date of adoption.

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

(Adopted May 7, 1976)(Amended September 2, 1977)
(Amended December 7, 1979)(Amended October 3, 1980)
(Amended October 7, 1983)

RULE 466. PUMPS AND COMPRESSORS

(a) Definitions

For the purpose of this rule:

1. Reactive Organic Compound means any chemical compound which contains the element carbon, which has a Reid vapor pressure (RVP) greater than 80 mm Hg (1.55 pounds per square inch), or an absolute vapor pressure (AVP) greater than 36 mm Hg (0.7 psi) at 20°C 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.
2. A Working Day is any day of the week except Saturday or Sunday or employee holiday.
3. Commercial Natural Gas means a mixture of gaseous hydrocarbons, chiefly methane, of pipeline quality such as that obtained from a company licensed to dispense such gases.

(b) Requirements

1. A person shall not use any pump or compressor handling reactive organic compounds unless such pump or compressor is equipped with adequate seals in good working order or other devices of equal or greater efficiency. Such seals or devices shall be maintained so that there shall not be, during operation or during non-operation:

   (A) A leakage 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.

2. Any pump or compressor found to leak gaseous volatile organic compounds in excess of 10,000 ppm, measured as hexane, when measured at the potential source with a portable hydrocarbon detection instrument, shall be repaired as follows:

   (A) Any pump or compressor having an operable spare permanently connected in the system shall be shut down or the spare pump or compressor placed in service, upon discovery of the leak. Such spare devices shall be inspected with a portable hydrocarbon detection instrument within 48 hours after they have been placed in service. A leaking spare pump or compressor shall be repaired within fifteen working days to a leakage rate of 10,000 ppm or less. If, after repairs are completed, the gaseous leakage rate from the unit is greater than 10,000 ppm when measured at the source with a portable hydrocarbon detection device, one of the following actions shall be taken:

      (i) Vent the emissions to an air pollution control device, or

      (ii) Petition the Hearing Board for a variance, or

      (iii) Repair or replace the leaking pump or compressor at the next turnaround of the process unit such that the leakage is less than 10,000 ppm. Units to be repaired or replaced at the turnaround shall be tagged to that effect, or otherwise conspicuously marked or coded in a manner easily identifiable to District

personnel.

(B) Any pump or compressor having no operable spare permanently connected in the system shall be:

(i) Repaired within one working day of discovery of the leak in such a manner that the leakage is minimized; and

(ii) Repaired or replaced at the next scheduled turnaround of the process unit such that the leakage is less than 10,000 ppm.

(iii) If, after repairs are completed, the leakage rate is greater than 10,000 ppm, then the leak shall be vented to an air pollution control device, or a petition for variance shall be submitted to the Hearing Board.

(c) Inspection Schedule

Persons subject to this rule shall:

1. Inspect each operating pump and compressor for any visual leakage once during every 24 hours of operation, except as provided in subsections (c)(2) and (c)(3) of this rule.
2. Inspect each operating pump and compressor less than three miles from a continuously manned control center for any visual leakage once during every eight-hour period.
3. Inspect each pump used in crude oil production and pipeline transfer for any visible leakage once each week.
4. Inspect each pump annually and each compressor quarterly with a portable hydrocarbon detection instrument for gaseous leaks of VOC in excess of 10,000 ppm measured as hexane at the potential source, however, the actual measurement shall be performed per subsection (f)(2).
5. Reinspect and repair at the end of six months those pumps of subsection (b)(2)(A) found to be leaking at the annual inspection.

(d) Exemptions

1. The provisions of this rule shall not apply to any pump or compressor which:

   (A) Operates at temperatures in excess of 260°C (500°F).

   (B) Is vented to an air pollution control system.

   (C) Is shut down and tagged or logged for maintenance.

   (D) Handles liquids or gases with a water content of 80 percent or greater.

   (E) Handles liquids or gases with a hydrogen composition of 80 percent or greater.

   (F) Handles commercial natural gas exclusively.

   (G) Incorporates dual seals with seal oil barriers, or an equivalent design approved by the Executive Officer, provided that the gases emitted from the seal oil reservoir or vented to the atmosphere are in compliance with the requirements of section (b)(2).

2. The provisions of section (b)(2) of this rule shall not apply to:

   (A) Any reciprocating pump used in crude oil production and pipeline transfer.

   (B) Any pump or compressor which has a driver of less than one (1) horsepower or equivalent rated energy.

(e) Recordkeeping

Each operator of a pump or compressor shall maintain records of inspections required by section (c)(4) in a manner specified by the Executive Officer.

(f) Measurement Requirements

1. The portable detection instruments used for the measurement of gaseous reactive organic compounds shall be equated to calibrating with hexane while sampling at one liter per minute.
2. Measurement of gaseous leakage rates shall be conducted:

   (A) At a distance of one centimeter from the source, or

   (B) As an alternative, the following concentration versus distance relationships may be used at the operator's option where the one centimeter distance is unsafe or impractical:

	Equivalent Concentration PPM at Requirement				
at	1 Cm	2 Cm	3 Cm	4 Cm	5 Cm
	10,000	6,000	4,000	2,000	1,000
	50,000	28,000	16,000	9,000	5,000

   Where an alternative distance from the source is used, the Executive Officer may require that the reason for the increased distance be verified and that the alternative distance be recorded for the specific pump or compressor, and, further, that such distance be used for all subsequent concentration measurements for the specific pump or compressor.

SCAQMD RULE 468 SULFUR RECOVERY UNITS
LAST REVISED 10/08/76

(Adopted May 7, 1976)(Amended October 8, 1976)

RULE 468. SULFUR RECOVERY UNITS

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 then 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.

(Adopted May 7, 1976)

Rule 469. Sulfuric Acid Units

A person shall not discharge into the atmosphere from any sulfuric acid unit, effluent process gas containing more than:

(a) 500 ppm of sulfur compounds averaged over a minimum of 15 consecutive minutes and calculated as sulfur dioxide on a dry basis.

(b) 90 kilograms (198.5 pounds) per hour of sulfur compounds calculated as sulfur dioxide.

SCAQMD RULE 470 ASPHALT AIR BLOWING
LAST REVISED 05/07/76

(Adopted May 7, 1976)

RULE 470. ASPHALT AIR BLOWING

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 760°C (1400°F) 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).

SCAQMD RULE 472 REDUCTION OF ANIMAL MATTER
LAST REVISED 05/07/76

(Adopted May 7, 1976)

RULE 472. REDUCTION OF ANIMAL MATTER

(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 650°C (1202°F) 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.

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

(Adopted May 7, 1976)(Amended October 8, 1976)
(Amended December 4, 1981)

RULE 474. FUEL BURNING EQUIPMENT - OXIDES OF NITROGEN

(a) A person shall not discharge into the atmosphere from any non-mobile fuel burning equipment, oxides of nitrogen, expressed as nitrogen dioxide (NO_2), 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:

Maximum Gross Heat Input Rate in Millions Per Hour

Fuel	Kilogram - Calories	British Thermal Units	Kilogram - Calories	British Thermal Units	Kilogram - Calories	British Thermal Units
	140 or more but less than 450	555 or more but less than 1786	450 or more but less than 540	1786 or more but less than 2143	540 or more	2143 or more
Gas	300 ppm NOx		225 ppm NOx		125 ppm NOx	
Liquid or Solid	400 ppm NOx		325 ppm NOx		225 ppm NOx	

(b) A person shall not discharge into the atmosphere from steam generating equipment, oxides of nitrogen dioxide (NO_2), 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:

Maximum Gross Heat Input Rate in Millions per Hour

	Kilogram - Calories	British Thermal Units
	140 or more	555 or more
Gas	125 ppm NOx	
Liquid or Solid	225 ppm NOx	

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 equipment, the simultaneous operations of which are required for the production of useful heat or power.
2. A SUPERCRITICAL STEAM GENERATING UNIT is a steam boiler which normally operates above the water critical temperature (705°F) 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.

(Adopted October 8, 1976)

RULE 475. Electric Power Generating Equipment

(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 electric power, for which ix 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 (NO_2), calculated at 3 percent oxygen on. a dry basis averaged over a minimum of 15 minutes, as shown in the following table:

Fuel	Gas	Liquid	Solid
Concentration	80 ppm NO_x	160 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 3 percent oxygen on a dry basis averaged over a minimum of 15 consecutive minutes.

(b) A person shall not discharge into the atmosphere from any gas turbine, installed and placed into operation after January 1, 1970, having a maximum heat input rate of more than 12.5 million kilogram calories (50 million BTU) per hour and used to produce electric power, combustion contaminants that exceed both of the following two limits:

(1) 5 kilograms (11 pounds) per hour.

(2) 23 milligrams per cubic meter (0.01 gr/SCF) calculated at 3 percent oxygen on a dry basis averaged over a minimum of 15 consecutive minutes.

(c) For the purpose of this rule,, equipment used to produce electric power shall be comprised of the minimum number of boilers, furnaces jet engines or other fuel burning equipment, the simultaneous operations of which are required for the production of useful electric power.

(d) Nothing in this rule shall be construed as preventing the maintenance or preventing the alteration or modification of existing electric power generating equipment which will not increase the mass rate of air contaminant emissions.

SCAQMD RULE 476 - STEAM GENERATING EQUIPMENT
LAST REVISED 10/08/76

(Adopted May 7, 1976)(Amended October 8, 1976)

RULE 476. STEAM GENERATING EQUIPMENT

(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 (NO_2), 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 NOx	225 ppm NOx

   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.

(Adopted October 7, 1977)(Amended December 2, 1977)
(Amended May 5, 1978)(Amended November 17, 2000)
(Amended January 11, 2002)

RULE 481. SPRAY COATING OPERATIONS

(a) Applicability

This rule applies to all spray painting and spray coating operations and equipment.

(b) Definitions

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

(1) AIRLESS SPRAY EQUIPMENT is spray equipment used to apply coatings where the coating fluid is supplied to the gun under fluid pressure and no air is added to the gun.

(2) CATALYZED EPOXY is a coating produced by combining an epoxy resin with a curing agent. Solvent evaporation causes the surface to dry while a chemical cross-linking process, called copolymerization, is the curing mechanism.

(3) CONTROL ENCLOSURE or SPRAY ENCLOSURE is any equipment or enclosure used to capture or reduce overspray from the application of any coating, adhesive, or other VOC-containing materials.

(4) ELECTROSTATIC SPRAY EQUIPMENT is spray equipment used to apply coatings where the atomized coating droplets are charged and subsequently deposited on the substrate by electrostatic attraction.

(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 "Standard Test Method for Specular Gloss" (1999).

(6) EXTERNAL AIR POLLUTION CONTROL DEVICE is any add-on device which is used to reduce the issuance of air contaminants.

(7) FACE VELOCITY is the air velocity through the exhaust filters of a spray enclosure calculated by the following formula:

$$V_{air} = \frac{VFR\ (CFM) \times 144\ (in^2/ft^2)}{N_{filter} \times A_{filter}\ (in^2)}$$

Where:

V_{air} = Air velocity (ft/min)

VFR	=	Volumetric flow rate (CFM) of fan
144	=	Conversion factor (ft^2 to in^2)
N_{filter}	=	Total number of filter elements
A_{filter}	=	Area of individual filter element (in^2)

(8) FIBROUS COATING is a coating containing fibers, such as fiberglass.

(9) HIGH-VOLUME, LOW-PRESSURE (HVLP) SPRAY EQUIPMENT is spray equipment used to apply coatings or adhesives by means of a spray gun which is designed to be 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.

(10) LACQUER is a coating substance consisting of resinous materials, such as cellulose esters or ethers, shellac, or gum of alkyd resins, dissolved in ethyl alcohol or other solvent that evaporates rapidly on application by evaporation without chemical reaction, leaving a tough, adherent film.

(11) POLYURETHANE is a thermoplastic polymer produced by the condensation reaction of a polyisocyanate and a hydroxyl-containing material.

(12) PRIMER is a coating applied for purposes of corrosion resistance or adhesion of subsequent coatings.

(13) 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.

(c) Equipment and Operational Requirements

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 velocity 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 HVLP, electrostatic and/or airless spray equipment.

(3) An alternative method of coating application or control is used which has an effectiveness equal to or greater than the equipment specified in paragraph (c)(1) or (c)(2) of this rule.

(d) Test Methods

(1) The transfer efficiency of alternative coating application methods, as defined by paragraph (c)(3), shall be determined in accordance with the SCAQMD method "Spray Equipment Transfer Efficiency Test Procedure for Equipment User," May 24, 1989. Alternative test methods may be used if they are determined to be equivalent and approved in writing by the Executive Officer, the California Air Resources Board, and the U.S. Environmental Protection Agency.

(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 shall constitute a violation of the rule.

(3) All test methods referenced in subdivision (d) shall be the most recent version approved by the Executive Officer, CARB, and EPA.

(e) Exemptions

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. Records of coating usage shall be maintained pursuant to Rule 109.

(2) Spray coating of 66 gallons per calendar month or less of coatings at a single location. Records of coating usage shall be maintained pursuant to Rule 109.

(3) Spray coating of a dwelling and its appurtenances by the owner or occupant of a four-family dwelling or less.

(4) 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.

(5) 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.

(6) 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.

(7) Any control enclosure connected to an external air pollution control device with a control efficiency equivalent to the filters specified in paragraph (c)(1) of this rule and which has been approved by the Executive Officer.

(8) Application of extreme high gloss topcoats used in marine pleasure craft coating operations.

(Adopted January 12, 1996)(Amended December 21, 2001)

RULE 518.2 FEDERAL ALTERNATIVE OPERATING CONDITIONS

(a) Purpose

This rule establishes procedures by which a Title V facility, as defined in subdivision (b) of Rule 3000 - General, may obtain approval of an Alternative Operating Condition from the District Hearing Board that would be recognized by the United States Environmental Protection Agency. Incorporation of an Alternative Operating Condition into a Title V permit pursuant to the requirements of this rule would shield the petitioner from enforcement pursuant to the federal Clean Air Act of otherwise applicable requirements specifically modified by the Alternative Operating Condition.

(b) Definitions

(1) ACTIVITY LEVEL is the amount of activity of the source during the emission reduction strategy, expressed in units consistent with the units of baseline and post-reduction emission rate.

(2) ALTERNATIVE OPERATING CONDITION is an order established by the Hearing Board pursuant to subdivision (e) of this rule which, if recognized by the United States Environmental Protection Agency, authorizes a source to be operated in a specified manner that would otherwise not comply with an applicable requirement of the State Implementation Plan or a permit term or condition based on any such applicable requirement.

(3) ALTERNATIVE OPERATING CONDITION CREDIT means an emissions reduction credit or a mobile source emission reduction credit created pursuant to an EPA approved rule, or an alternative credit or allowance approved into the SIP by EPA, and held by the District for the purpose of offsetting excess emissions allowed under an Alternative Operating Condition.

(4) ALTERNATIVE OPERATING CONDITION CREDIT BANK means the repository for the Alternative Operating Condition Credits that the District is holding to offset excess emissions pursuant to this rule.

(5) APPLICABLE REQUIREMENTS means all requirements listed in paragraph (c)(1).

(6) BASELINE EMISSION RATE means the lowest of:

(A) The emission rate allowed by the most stringent regulatory requirement applicable to the source; or

(B) The emission rate in an applicable Air Quality Management Plan Control Measure with implementation dates contemporaneous with the emission reduction; or

(C) The documented actual historical emission rate averaged over the two years preceding the emission reduction.

(7) BREAKDOWN means a condition caused by a mechanical or electrical failure or the failure of a source to operate as designed.

(8) EMERGENCY means any situation arising from sudden and reasonably unforeseeable events beyond the control of the source, including acts of God, which situation requires immediate corrective action to restore normal operation, and that causes the source to exceed a technology-based emission limitation under the permit, due to unavoidable increases in emissions attributable to the emergency. An emergency shall not include noncompliance to the extent caused by improperly designed equipment, lack of preventative maintenance, careless or improper operation, or operator error.

(9) EMISSION REDUCTION DURATION is the length of time during which the emission reduction strategy results in verifiable and surplus emission reductions.

(10) EXCESS EMISSIONS means the amount of emissions from a source, stated in pounds per month, that exceeds the amount of emissions that would be allowed if the source were operated in compliance with an applicable requirement, calculated pursuant to paragraph (h)(1) of this rule.

(11) FACILITY means any permit unit or source, or grouping of permit units or sources, or other air contaminant-emitting activities which are located on one or more contiguous properties, 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 defined in 40 CFR Section 55.2. Such above-described groupings, if on noncontiguous

properties, but connected only by land carrying a pipeline, shall not be considered one facility. Equipment 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 facility on shore.

(12) INTRA-FACILITY EMISSION REDUCTION CREDIT is an amount of emission reduction from within a facility seeking an Alternative Operating Condition that is eligible for credit pursuant to the criteria set forth in this rule. Intra-facility Emission Reduction Credits may be used to reduce the amount of Alternative Operating Condition Credits needed to obtain an Alternative Operating Condition.

(13) POST-REDUCTION EMISSION RATE means the emission rate of the source after implementation of the emission reduction strategy.

(14) SOURCE means any discrete operation, unit or pollutant-emitting activity at a facility.

(15) TITLE V FACILITY means any facility that meets the criteria set forth in subdivision (a), (b) or (c) of Rule 3001 - Applicability.

(c) Applicability

(1) This rule authorizes the District Hearing Board to establish Alternative Operating Conditions for Title V facilities. Alternative Operating Conditions may be established for the following statute and District rules and regulations, and for federally-enforceable permit terms and conditions that are based on such statute, rules and regulations:

(A) Health and Safety Code Section 41701;

(B) Rules 202, 203, 217, 218 and 221;

(C) Regulation IV, except Rules 402 and 430;

(D) Regulation VII;

(E) Regulation XI;

(F) Rule 2202; and

(G) Regulation XX, except-

(i) any provisions which require Permits to Construct or which set forth requirements for Permits to Construct,

(ii) missing data provisions of Appendix A, Chapter 2 of Rule 2011 - Requirements for Monitoring, Reporting, and

Recordkeeping for Oxides of Sulfur (SO_x) Emissions, and Appendix A, Chapter 2 of Rule 2012 - Requirements for Monitoring, Reporting, and Recordkeeping for Oxides of Nitrogen (NO_x) Emissions, and

(iii) subdivisions (b), (d), (o), and (p) of Rule 2004 – Requirements, and any permit conditions which state annual Allocations.

(2) No Alternative Operating Condition shall be granted from any federally promulgated rule, regulation or permit condition, or any District rule that substitutes for such requirements under section 112(l), including but not limited to the following:

(A) the requirement to apply for and obtain an operating permit under Rule 3002 - Requirements, or an authority to construct;

(B) any requirement of NSPS, NESHAP or other standard promulgated by the U.S. EPA under Sections 111 or 112 of the Clean Air Act;

(C) any standard promulgated by the U.S. EPA under Title IV or Title VI of the Clean Air Act; or

(D) any requirement contained in a permit issued by the U.S. EPA.

(3) No Alternative Operating Condition shall be granted from any rule or provision for which a variance is not allowed under Rule 504 - Rules for Which Variances Are Not Allowed.

(4) Except in the case of an emergency or a breakdown of technology, no Alternative Operating Condition shall be granted from the requirement to implement Best Available Control Technology as required by Rule 1303(a) or 2005 or from a permit condition that was imposed to avoid application of Best Available Control Technology as required by Rule 1303(a) or 2005.

(5) Except in the case of an emergency or a breakdown of technology, no Alternative Operating Condition shall be granted from a permit condition which was imposed to avoid the applicability of a requirement from which a variance may not be granted pursuant to paragraphs (c)(1) and (c)(2).

(d) Modification of Applicable Requirements

A source shall not be subject to a provision of an applicable requirement specified in paragraph (c)(1) of this rule if the source is subject to an Alternative Operating

Condition established for such provision that has been incorporated into its Title V permit in accordance with paragraph (f) of this rule.

(e) Establishment of Alternative Operating Conditions

(1) Alternative Operating Conditions may be established only by the District Hearing Board upon petition relating to a specified source.

(2) A petitioner shall not receive an Alternative Operating Condition unless all of the following circumstances exist:

(A) the petitioner is or will be in violation of any applicable requirement(s) listed in paragraph (c)(1) of this rule;

(B) due to conditions beyond the reasonable control of the petitioner, requiring compliance would result in either (1) an arbitrary or unreasonable taking of property or (2) the practical closing and elimination of a lawful business. In making the above findings, where the petitioner is a public agency, the Hearing Board shall consider whether or not requiring immediate compliance would impose an unreasonable burden upon an essential public service. For purposes of this subparagraph, "essential public service" means a prison, detention facility, police or fire-fighting facility, school, health care facility, landfill gas control or processing facility, sewage treatment works, or water delivery operation, if owned and operated by a public agency;

(C) the closing or taking would be without a corresponding benefit in reducing air contaminants;

(D) the petitioner for the Alternative Operating Condition has given consideration to curtailing operations of the source in lieu of obtaining an Alternative Operating Condition;

(E) during the period the Alternative Operating Condition is in effect, the petitioner will reduce excess emissions to the maximum extent feasible;

(F) during the period the Alternative Operating Condition is in effect, the petitioner will monitor or otherwise quantify emission levels from the source, and report these emission levels to the District pursuant to a schedule established by the District;

(G) the Alternative Operating Condition will not result in noncompliance with the requirements of any NSPS, NESHAP or

other standard promulgated by the U.S. EPA under Sections 111 or 112 of the Clean Air Act, or any District rule that substitutes for such requirements under section 112(l), or any standard or requirement promulgated by the U.S. EPA under Titles IV or VI of the Clean Air Act, or any requirement contained in a permit issued by the U.S. EPA, or other requirement contained in paragraph (c)(2);

(H) any emissions (calculated pursuant to subparagraph (h)(3)(B) of this rule) resulting from the Alternative Operating Condition will not, in conjunction with emissions (calculated pursuant to subparagraph (h)(3)(B)) resulting from all other Alternative Operating Conditions established by the Hearing Board and in effect at the time, exceed the amount of Alternative Operating Condition Credits held in the Alternative Operating Condition Credit Bank; and

(I) operation under the Alternative Operating Condition will not result in the source discharging 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 to the public, or which cause, or have a natural tendency to cause, injury or damage to business or property.

(3) In addition to the circumstances specified in paragraph (e)(2) of this rule, if the violation of the applicable requirement is caused by a breakdown of technology, a petitioner shall not receive an Alternative Operating Condition unless all of the following circumstances exist:

(A) the violation could not have been prevented through careful planning or design;

(B) the breakdown could not reasonably have been foreseen and avoided;

(C) at all times the equipment, including air pollution control equipment, or processes were maintained and operated in a manner consistent with good practice for minimizing emissions;

(D) repairs were or will be made in an expeditious fashion using off-shift labor and overtime, to the extent practicable, to ensure that such repairs are made as expeditiously as practicable; and

(E) the breakdown is not part of a recurring pattern indicative of inadequate design, operation, or maintenance.

(4) If the violation occurs during startup or shutdown, the frequency and duration of operation in startup or shutdown mode must be minimized to the maximum extent practicable.

(5) The Hearing Board shall not establish an Alternative Operating Condition unless the Board establishes, as part of the Alternative Operating Condition, enforceable alternative emissions limits, operational requirements, and/or monitoring and recordkeeping provisions, as set forth in subdivision (g).

(6) The Hearing Board shall not establish an Alternative Operating Condition unless it makes its findings that the circumstances described in paragraphs (e)(2), (e)(3) and/or (e)(4), as applicable, exist. The petitioner bears the burden of proof. The findings shall be based on evidence in the record of a public hearing which is noticed and conducted in compliance with Health and Safety Code Sections 40820-40865, except in the case of an Alternative Operating Condition established by the Board or a single member thereof under circumstances specified in Health & Safety Code Section 42359 or 42359.5. An Alternative Operating Condition established by the Board under circumstances specified in Health & Safety Code Section 42359 shall be based on evidence in the record of a public hearing which is conducted pursuant to Health & Safety Code Sections 40820, 40822, and 40828-40865. An Alternative Operating Condition established by a single Board member under circumstances specified in Health & Safety Code Section 42359.5 shall be based on evidence presented in the form of a petition and declaration signed under penalty of perjury, and may be supplemented by sworn oral testimony.

(7) The Hearing Board shall deny a petition for an Alternative Operating Condition if excess emissions resulting from operation of a source pursuant to the Alternative Operating Condition would, by themselves, cause an exceedance of a National Ambient Air Quality Standard. The burden of proof on this issue, should it arise, shall be upon the source.

(f) EPA Objection; Effective Date of Alternative Operating Condition

(1) Each Alternative Operating Condition shall be subject to review for 30 days by the public and any affected state, and, concurrently, for 45 days

by the U.S. EPA. The review period may commence prior to approval of the Alternative Operating Condition by the Hearing Board and, in such event, will satisfy this subdivision if the terms of the Alternative Operating Condition approved by the Hearing Board do not significantly deviate from the proposed terms that were made available to the public, affected states, and the U.S. EPA.

(2) Copies of any adverse comments shall be forwarded to EPA by the District within two (2) working days of receipt.

(3) If the terms of the Alternative Operating Condition approved by the Hearing Board significantly deviate from proposed terms released for review, the approved terms must be subjected to the notice requirements of paragraphs (f)(4) and (f)(5) and the process requirements of paragraph (f)(6).

(4) The U.S. EPA's 45-day review period shall commence on the latter of the date of public notification or upon the U.S. EPA's receipt of the following information:

(A) a copy of the proposed or issued Alternative Operating Condition;

(B) information sufficient to support the findings set forth in subdivision (e); and

(C) the name of any affected state as defined in subdivision (b) of Rule 3000 - General.

(5) Notification to the public and affected states shall commence upon the date of notice as specified in Rule 3006 - Public Participation, including publication in a daily newspaper of general circulation.

(6) If EPA objects to the Alternative Operating Condition in writing within its 45 day review period, in the manner set forth in paragraph (k)(1) of Rule 3003 - Applications--

(A) the District shall notify the petitioner of U.S. EPA's objection; and

(B) the Alternative Operating Condition shall be ineffective unless the Hearing Board adopts and submits to U.S. EPA a revised Alternative Operating Condition which conforms to such objection or EPA issues a written rescission to its objection.

(7) If the U.S. EPA does not object to the Alternative Operating Condition, it shall become operative, effective as of the date of issuance by the Hearing Board, subject to the provisions of subdivision (l) of Rule 3003 -

Applications. The effective date shall be the date of filing the petition with the Hearing Board if excess emissions during the period between the filing of the petition and the issuance of the Alternative Operating Condition by the Hearing Board are quantifiable and all circumstances specified in paragraph (e)(2) existed during this period.

(g) Content of Alternative Operating Conditions

Each Alternative Operating Condition shall contain the following provisions, as applicable:

(1) Emission Limits

If an Alternative Operating Condition allows emissions that are greater than an emission limit in an applicable requirement, the Hearing Board shall establish an enforceable alternative emission limit that requires the source to reduce excess emissions to the maximum extent feasible. The Hearing Board may establish an alternative emission limit for any source located at the facility that creates emissions of the subject pollutant that may feasibly be reduced.

(2) Operational Requirements

If an Alternative Operating Condition allows deviation from an applicable operational requirement that is designed to limit or minimize emissions, the Hearing Board shall establish an enforceable alternative operational requirement or emission limit that requires the source to operate in a manner that reduces excess emissions to the maximum extent feasible. The Hearing Board may establish an alternative operational requirement or emission limit for any source located at the facility which creates emissions of the subject pollutant that may feasibly be reduced.

(3) Monitoring, Recordkeeping, and Reporting Requirements

If the Alternative Operating Condition allows deviation from an applicable emissions monitoring, recordkeeping or reporting requirement, the Hearing Board shall establish an enforceable alternative requirement which, to the extent feasible:

(A) mandates quantification, recordkeeping, and reporting of emissions as accurately, expeditiously, and verifiably as the applicable requirement,

(B) complies with the requirements of paragraph (a)(4) of Rule 3004 - Permit Type and Content, and

(C) for RECLAIM sources, complies with the RECLAIM protocols for monitoring, recordkeeping, and reporting.

(4) Conditions

The Hearing Board shall impose conditions, other than those imposed by applicable requirements, that are necessary to ensure quantifiability of emissions increases, and any decreases, resulting from the Alternative Operating Condition.

(5) Stringency

Any alternative requirement or other condition imposed pursuant to this subdivision shall not be more stringent than an applicable requirement, except when consented to by the petitioner for purposes of excess emissions mitigation.

(6) Term

Each Alternative Operating Condition established by the Hearing Board shall include a term during which the Alternative Operating Condition shall be in effect. The term shall be determined in accordance with Health and Safety Code Sections 42352 and 42358. Upon termination of the Alternative Operating Condition, the source shall comply with all applicable requirements and the preexisting permit term(s) shall have full force and effect.

(7) EPA Objection

Each Alternative Operating Condition shall contain a provision stating that if the U.S. EPA objects to the Alternative Operating Condition within its 45 day review period or in response to a citizen petition, the Alternative Operating Condition is ineffective to protect the petitioner from U.S. EPA or citizen enforcement under the federal Clean Air Act for any federally enforceable requirement.

(h) Emissions Calculations

For purposes of determining whether or not the amount of excess emissions resulting from an Alternative Operating Condition exceeds the amount of Alternative Operating Condition Credits in the Alternative Operating Condition Credit Bank, as set forth in subparagraph (e)(2)(H) of this rule, the amount of excess emissions resulting from establishment of an Alternative Operating Condition, and the amount of any emission reductions resulting from conditions

included in the Alternative Operating Condition, shall be determined in the following manner:

(1) Excess Emissions

Excess emissions from the source that is in violation of an applicable requirement shall be calculated as follows:

(A) calculate calendar monthly mass emissions allowed by the applicable requirement based on the terms of the applicable requirement and projected activity during the term of the Alternative Operating Condition;

(B) calculate calendar monthly mass emissions allowed by the Alternative Operating Condition based on any alternative emission limits, operational requirements and other conditions established pursuant to subdivision (g), and projected activity during the term of the Alternative Operating Condition; and

(C) subtract the calendar monthly mass emissions calculated pursuant to subparagraph (A) from the calendar monthly mass emissions calculated pursuant to subparagraph (B).

(2) Intra-Facility Emission Reductions

A Title V facility may reduce the amount of Alternative Operating Condition Credits it needs to obtain an Alternative Operating Condition by reducing emissions internally from a source other than the source which is in violation of an applicable requirement. The reduction shall meet the following requirements:

(A) The emission reduction duration shall be contemporaneous with the period during which the Alternative Operating Condition is in effect;

(B) The emission reduction shall be:

(i) *real* (meaning the emission reduction reflects an actual decrease in air emissions);

(ii) *quantifiable* (meaning the quantity of emission reductions can be measured by accurate and replicable techniques. These techniques shall be at least as accurate and replicable as the emission testing methods accepted by the U.S. EPA for State Implementation Plan rule purposes);

(iii) *permanent* (meaning the emission reduction will exist for the duration of the Alternative Operating Condition);

(iv) *enforceable* (meaning that credible and relevant evidence exists throughout the emission reduction duration with which to evaluate compliance with the terms and conditions of the Alternative Operating Condition governing the reduction); and

(v) *surplus* (meaning that throughout the duration of the Alternative Operating Condition, the emission reduction: is not required by any local, state, or federal rule, regulation, law or ordinance; has not been assumed to occur in the Air Quality Management Plan; and no credit has been or shall be taken for the emission reduction under any other program, rule, or regulation).

(vi) The source providing the emission reduction shall be in compliance with all applicable EPA, ARB, and District rules and regulations, except that in the case of a source which performs multiple processes, emission reductions may be provided from a process that is in compliance with all applicable EPA, ARB, and District rules and regulations even if other processes performed by the same source are not in compliance with such requirements.

(C) Reductions of RECLAIM pollutants at RECLAIM facilities shall not be eligible to generate emission reductions.

(D) Intra-facility Emission Reduction Calculation Methodology

The quantity of emission reductions generated by an emission reduction strategy within a facility shall be calculated according to the following formula:

$$IER_{month\ i} = [\text{Baseline Emission Rate}_{month\ i}] - \text{Post-reduction Emission Rate}_{month\ i} \times \text{Activity Level}_{month\ i}$$

Where:

$IER_{month\ i}$	=	Intra-facility Emission Reductions for month i
Baseline Emission $Rate_{month\ i}$	=	Baseline emission rate in month i
Post Reduction Emission $Rate_{month\ i}$	=	Post Reduction emission rate in month i

$\text{Activity Level}_{\text{month i}}$ = Activity Level of the source in month i

(3) Alternative Operating Condition Credit Bank Balance Determination

(A) The Hearing Board will maintain a record of the balance of emissions in the Alternative Operating Condition Credit Bank on a daily basis.

(B) The amount of emissions that will be debited from the Alternative Operating Condition Credit Bank as a result of an Alternative Operating Condition will be determined by subtracting the emission reduction calculated pursuant to paragraph (2), and the amount of any emission reduction credits temporarily surrendered by the petitioner pursuant to paragraph (5), from excess emissions calculated pursuant to paragraph (1). Any remaining excess emissions calculated pursuant to this subparagraph shall be subtracted from the balance of the Alternative Operating Condition Credit Bank for the applicable period.

(4) The petitioner shall notify the Hearing Board within five days after achieving continuous compliance with an applicable requirement for which an Alternative Operating Condition has been issued. Upon notification, the Alternative Operating Condition for that applicable requirement shall expire. Any unused emissions previously allocated to a petitioner will be restored by the Hearing Board to the balance of the Alternative Operating Condition Credit Bank for the same period from which they were originally debited.

(5) For non-RECLAIM sources, and non-RECLAIM pollutants at RECLAIM sources, the amount of excess emissions calculated pursuant to paragraph (h)(1) may be reduced by the amount of excess emissions credits or offsets approved pursuant to Regulation XIII - New Source Review, which the facility voluntarily relinquishes for the term of the Alternative Operating Condition. Relinquishment of ERCs shall not be deemed to satisfy the requirements of subparagraph (e)(2)(E). Executive Officer will not issue a Permit to Construct which relies upon ERCs relinquished pursuant to this paragraph during the period for which such ERCs have been relinquished. The Executive Officer shall not discount the value of ERCs due to relinquishment pursuant to this paragraph.

(i) Tracking of Alternative Operating Condition Credits

The District shall use generally accepted accounting principles for the establishment and implementation of a system for tracking, on a daily basis, the balance of the Alternative Operating Condition Credit Bank. The District shall provide for an annual audit of the tracking system. If the audit shows that the District has failed to establish or implement that tracking system described above, issuance of future Alternative Operating Conditions shall be suspended until such tracking system has been established and implemented.

(j) Compliance with Alternative Operating Condition

Any source that is subject to an Alternative Operating Condition shall comply with such condition at all times during its term. Any violation of a permit term or condition implementing an Alternative Operating Condition shall constitute a separate violation of this rule for each day of violation.

(k) Fees

Fees for Alternative Operating Conditions will be assessed pursuant to Regulation III - Fees.

(l) Effective Date of Rule

This rule shall be effective upon approval by the U.S. EPA of Regulation XXX - Title V Permits, under Title V of the Clean Air Act, and U.S. EPA approval into the SIP of this rule.

(m) Notice to U.S. EPA

All notices required by this rule to be sent to EPA shall be sent to the Permits Office Chief, Air Division, U.S. EPA Region 9.

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

(Adopted May 6, 1977)(Amended June 2, 1978)
(Amended April 4, 1980)(Amended July 9, 1982)
(Amended September 8, 1995)(Amended June 13, 1997)

RULE 701. - AIR POLLUTION EMERGENCY CONTINGENCY ACTIONS

(a) Applicability

This rule shall apply to all persons within the jurisdiction of the South Coast Air Quality Management District, and shall also specify the measures to be taken by the South Coast Air Quality Management District during air pollution episodes.

(b) Purpose

The purpose of this rule is to:

(1) define air pollution episode criteria;

(2) provide for episode notification to the public;

(3) recommend precautionary actions to be taken during episodes; and

(4) prevent or reduce the severity of episodes.

(c) Definitions

For the purpose of this rule, the following definitions apply:

(1) **AIR CONTAMINANT OR AIR POLLUTANT** means any discharge, release, or other propagation into the atmosphere and includes, but is not limited to, smoke, charred paper, dust, soot, grime, carbon, fumes, gases, odors, particulate matter, acids or any combination thereof.

(2) **DECLARED EPISODE** exists whenever the Executive Officer determines:

(A) that any of the applicable episode criteria levels specified in this rule have been attained or,

(B) that it is likely that any of the applicable episode criteria levels specified in this rule is imminent to be attained that day.

(3) **CHILD DAY CARE FACILITY** means a State licensed child day care, pre-school, or after-school program.

(4) **ELECTRIC POWER GENERATING SYSTEM** means all boiler and approved alternative resources owned or operated by, and approved alternative 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.

(5) **EPISODES** are the intermediate levels between the National Ambient Air Quality Standard and the Level of Significant Harm for air pollutants at which some pollution abatement or health notification action must be taken. The applicable episode criteria, by pollutant and averaging period established by the Environmental Protection Agency (EPA) and the California Air Pollution Emergency Plan are presented in Attachment 2.

(6) **ESSENTIAL PUBLIC SERVICE:** means:

(A) a sewage treatment facility which is publicly owned and operated consistent with an approved regional growth plan;

(B) a prison;

(C) police or fire fighting operations;

(D) schools, hospitals, or ambulance operations;

(E) construction and operation of a landfill gas control or processing facility;

(F) water delivery operations;

(G) public or private utility operations responding to public emergencies or utility outages, excluding routine maintenance, or

(H) public transit;

(I) U.S. Postal Service Operations.

(7) **FLEET VEHICLES** are motor vehicles as defined by the Motor Vehicle Code Division 1, Section 415 of the State of California Vehicle Code and operated from one business address.

(8) **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 supply restriction resulting from California Public Utility Commission (CPUC) priority allocation system of CPUC Rule 23, such that the daily fuel needs of a boiler cannot be met with the natural gas available.

(9) **NEWS MEDIA** includes the written press, television, radio, and other mass media of communication such as on-line computer information services.

(10) **OUTDOOR ACTIVITY CURTAILMENT ACTIONS** are measures, as presented in Attachment 1, to reduce outdoor activities by children during periods when air quality exceeds the Health Advisory Episode level for ozone or the Stage 1 Episode for all other pollutants for which episode criteria are defined.

(11) **POLLUTANT STANDARDS INDEX (PSI)** means the uniform reporting system established by the U.S. Environmental Protection Agency to make air pollution reports more easily understood by the public. The PSI simplifies information by converting units of air pollution measurement into a uniform scale from 0 to 500.

(12) **PREDICTED EPISODE** exists whenever the Executive Officer determines that it is likely that any of the episode levels specified in this Rule will be reached during the following day.

(13) **SCHOOL** means public and private educational institutions for children ranging from grades Kindergarten through 12.

(14) **SOURCE/RECEPTOR AREAS**. A source area is that area in which contaminants are discharged and a receptor area is that area in which the contaminants accumulate and are measured. Any of the areas can be a source area, a receptor area, or both a source and receptor area. The source/receptor areas are delineated on the attached map (Attachment 3).

(15) **UPSET OF PRODUCTION** means that the process throughput or production rate is reduced by more than 20 percent of normal daily operations for Stage 2 or Stage 3 Episodes as a direct result of reducing emissions in order to comply with this regulation.

(16) **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.

(17) **WILDLAND VEGETATIVE MANAGEMENT BURNING** means 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, trees, grass or standing brush as defined by Title 17, California Administrative Code, Section 80100.

(d) Measurements

The Executive Officer shall maintain air monitoring stations throughout the District so that air quality can be monitored on continuous basis and air pollution episodes can be measured and predicted. Air quality information will be reported daily using the Pollutant Standards Index (PSI).

(e) Facility Requirements

(1) The following actions are required for the owner or operator of any facility which has actual emissions of 91 metric tons (100 tons) or more per year of either volatile organic compounds (VOC's), oxides of nitrogen (NO_x), or oxides of sulfur (SO_x), and are encouraged for all other emitters of these pollutants:

(A) Upon notification of a predicted Stage 2 or Stage 3 episode either from the Executive Officer or via the news media, reduce combined emissions for VOC's, NO_x, and SO_x, by at least 20 percent of normal weekday operations.

(B) Upon notification by the District of the declaration of an air pollution state of emergency by the Governor, take the applicable actions which the Governor requires.

(2) The following actions are required for any facility having 100 or more employees, where employees are defined in Rule 2202:

(A) Upon notification of a predicted Stage 2 or 3 Episode either from the Executive Officer or via the news media, post at least one sign in a conspicuous place designating the predicted episode stage and requesting ridesharing and telecommuting.

(B) Upon notification of a predicted Stage 2 or Stage 3 episode either from the Executive Officer or via the news media, reduce fleet vehicle miles traveled by at least 20 percent of normal week day operations.

(C) Upon notification by the District of the declaration of an air pollution state of emergency by the Governor, take the applicable actions which the Governor requires.

(3) All facilities subject to paragraphs (e)(1) or (e)(2) are encouraged to develop and maintain an internal plan to meet the specified requirements.

(4) Upon a predicted Stage 2 or Stage 3 Episode, an owner or facility shall maintain a log of the actions taken to meet the requirements in (e)(1), and (e)(2).

(5) Facilities required to implement Stage 2 or Stage 3 actions shall implement such actions by at least just after midnight (00:01 hours standard time) or upon commencement of normal business hours on the day for which an episode is predicted.

(6) Liquid or solid fossil fuel shall not be burned in electric power generating systems on predicted or declared Stage 2 or Stage 3 episode days of ozone, sulfur dioxide, sulfur dioxide plus ozone, or sulfates in combination with ozone unless a force majeure natural gas curtailment is in effect.

(f) Episode Notifications by the Executive Officer

(1) The Executive Officer shall notify the California Air Resources Board and the news media (e.g. those media in each

county determined to be most likely to result in widespread public knowledge) whenever an episode is predicted, declared, or terminated.

(2) The Executive Officer may notify directly or shall otherwise rely on the news media to disseminate to the following whenever an episode is predicted, declared, or terminated:

(A) School officials;

(B) Local and state law enforcement agencies;

(C) Public safety personnel who have responsibilities for or interest in air pollution control;

(D) All facilities or activities subject to paragraphs (e)(1) or (e)(2).

(3) The Executive Officer shall announce the prediction of an episode not later than 2:00 pm (4:30 pm for sulfate portion of ozone/sulfate episode) of the day before the episode is predicted to occur.

(4) A declared or predicted episode shall be terminated whenever the air contaminant which caused the episode has been verified by the Executive Officer to be below the applicable episode criteria set forth for the calling of such episode and the available scientific and meteorological data indicate that the concentration of such air contaminant will not likely increase again within the next hour so as to reach the previously attained episode.

(5) The notice of an episode shall include the following:

(A) Stage level and predicted duration.

(B) The affected source and receptor areas.

(C) Contaminants for which the episode is declared.

(D) The Pollutant Standards Index (PSI) value for the pollutant with the highest predicted or actual PSI reading and associated health message.

(g) Episode Actions by the Executive Officer

Upon the declaration of any predicted or attained episode, the Executive Officer shall take the following actions:

(1) For Ozone Health Advisories Only:

(A) Recommend as part of the notification required by (f) that schools and child day care facilities take the actions specified in Attachment 1, paragraph (b);

(B) Recommend as part of the notification required by (f) to the public that individuals with special health problems follow the precautions recommended by their physicians or health officials;

(C) By means of a telephone recorded message, notify members of the public who contact the District.

(2) For Stage 1 Episodes:

(A) Recommend as part of the notification required by (f) that schools and child day care facilities take the actions specified in Attachment 1, paragraph (c);

(B) Take the actions specified in subparagraphs (g)(1)(B) and (g)(1)(C);

(C) Encourage the public to reduce unnecessary driving;

(D) Encourage the public to ride share;

(E) Encourage employers to limit the amount of time their employees work outdoors to the degree practicable.

(3) For Stage 2 and Stage 3 episodes:

(A) Recommend as part of the notification required by (f) that schools and child day care facilities take the actions specified in Attachment 1, paragraph (d);

(B) Take the actions specified in subparagraphs (g)(2)(B) through (g)(2)(E);

(C) Within the receptor area(s) of the episode:

(i) Recommend the suspension of programs which involve the physical exertion by participants using public parks or public recreation facilities;

(ii) Recommend that all non-emergency driving be discontinued as soon as possible.

(D) The Executive Officer shall implement source inspections upon a predicted episode.

(h) Special Actions for Wildland Vegetative Management Burning

(1) Upon declaration of any predicted Stage 2 or Stage 3 episode, all vegetative management burning is prohibited.

(2) Upon the declaration of any attained Stage 2 or Stage 3 episode, all vegetative management burning, if already ignited, shall be terminated.

(i) Interdistrict Coordination

Upon request of an air pollution control officer in an adjoining air basin for action to abate Stage 2 or Stage 3 episodes occurring within that district, the Executive Officer shall make a determination, and if the need for action is confirmed, direct the implementation of the actions required in this Rule for any significant source area identified within the District which contributes to the ongoing episode in the adjoining district. Sources in that area shall comply as though an episode has been declared in their area.

(j) Effective Date:

This amendment to Rule 701 shall become effective immediately upon adoption by the District Board.

(k) Exemptions:

(1) Percentage emissions reductions or percentage reductions in vehicle miles traveled lower than those specified in section (e) shall be allowed by the Executive Officer

(A) if the facility submits a letter to the Executive Officer, not later than 30 days following a predicted Stage 2 or Stage 3 episode, demonstrating at least one of the following conditions:

(i) that meeting the stated percentage reductions jeopardizes public health or safety,

(ii) that meeting the stated percentage reductions damages equipment or creates an upset of production, or

(B) the facility or activity is an essential public service.

(2) Buses, commuter van pool vehicles or other vehicles, used exclusively for multi-passenger commuting between home and the place of work or school are excluded from the fleet vehicle reduction provisions of section (e).

(3) Programs that include adult participants in scheduled athletic events with paid attendance are exempted from clause (g)(3)(C)(i).

ATTACHMENT 1

OUTDOOR ACTIVITY CURTAILMENT ACTIONS

State and federal guidance identifies the following actions that schools and child day care facilities can take to curtail outdoor activities to reduce or minimize children's exposure to air pollution:

(a) For periods of unhealthful air quality (exceeding the federal clean air standards):

(1) Susceptible individuals, e.g. children with heart or lung disease:

Minimize outdoor activity.

(2) Healthy individuals with a noticeable adverse health response to existing conditions:

Minimize outdoor activity.

(b) For Health Advisory Episodes (applies only to ozone):

(1) All children:

Discontinue prolonged, vigorous outdoor exercise lasting longer than one hour.

(2) Susceptible persons, such as those with heart or lung disease:

Avoid outdoor activity.

(3) Examples of the kinds of outdoor activities that should be avoided are calisthenics, basketball, running, soccer, football, tennis, swimming laps, water polo.

(c) For Stage 1 Episodes:

(1) All children:

Discontinue all vigorous outdoor activities regardless of duration.

(2) Outdoor physical education (PE) classes, sports practices, and athletic competitions should be re-scheduled or canceled if practicable.

(d) For Stage 2 or Stage 3 Episodes:

(1) All children:

Discontinue all outdoor activities.

ATTACHMENT 2

EPISODE CRITERIA

For the purpose of Rule 701, the following episode criteria shall apply:

Contaminant	Averaging Time	Health Advisory	Stage 1	Stage 2	Stage 3
Ozone	1 Hour	0.15 ppm	0.20 ppm	0.35 ppm	0.50 ppm
Ozone, In Combination with Sulfur Dioxide	1 Hour		0.20 ppm*	0.35 ppm*	0.50 ppm*
Carbon Monoxide	1 Hour		40 ppm	75 ppm	100 ppm**
	8 Hours***		15 ppm	30 ppm	40 ppm
Sulfur Dioxide	1 Hour		0.5 ppm	1.0 ppm	2.0 ppm
	24 Hours***		0.2 ppm	0.6 ppm	0.8 ppm
Sulfate, in Combination with Ozone	24 Hours*** (Sulfate)			25 ug/m^3	
	1 Hour (Ozone)			0.20 ppm	
Nitrogen Dioxide	1 Hour		0.6 ppm	1.2 ppm	1.6 ppm
	24 Hours***		0.15 ppm	0.3 ppm	0.4 ppm
Fine Particulate Matter (PM_{10})	24 Hours***		350 ug/m^3	420 ug/m^3	500 ug/m^3

* These levels shall apply when the ozone concentration and the sulfur dioxide concentration each exceeds 0.10 ppm, one-hour average, and shall be determined by adding the ozone and sulfur dioxide concentration.

** For one hour and predicted to persist for one additional clock hour.

*** Averaging time is based on a running clock hourly average.

ATTACHMENT 3

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

(Adopted October 7, 1977)

RULE 1101. SECONDARY LEAD SMELTERS/SULFUR OXIDES

(a) A person shall not discharge into the atmosphere from any lead melting furnace such as described in Section (b) below, effluent process gas containing sulfur oxides in excess of the concentration and mass flow rate indicated by both subsections (a)(1) and (a)(2):

(1) 200 ppm of sulfur oxides expressed as sulfur dioxide, measured at the point of emission to the atmosphere, and calculated on a dry basis averaged over a minimum of 15 consecutive minutes, and

(2) 2.1 kilograms of sulfur oxides per metric ton of process weight (4.2 pounds of sulfur oxides per short ton of process weight) expressed as sulfur dioxide.

(b) This rule shall apply only to furnaces used to recover lead from the following:

(1) Automotive batteries, and/or

(2) Slag and dross resulting from the melting of automotive batteries.

(Adopted June 6, 1980)(Amended February 13, 1981)
(Amended April 2, 1982)(Amended April 3, 1987)
(Amended December 7, 1990)

RULE 1102.1. PERCHLOROETHYLENE DRY CLEANING SYSTEMS

(a) Definitions

For the purpose of this rule, the following definition shall apply:

DRY CLEANING FACILITY is any facility engaged in the cleaning of fabrics or leather using one or more washes in perchloroethylene solvent, extracting excess solvent by spinning, and drying by tumbling in an airstream. The facility includes, but is not limited to, washers, dryers, filter and purification systems, waste disposal systems, holding tanks, pumps and attendant piping and valves.

(b) Operating Requirements A person shall not operate any perchloroethylene 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, access doors, and other parts of this equipment where perchloroethylene may be exposed to the atmosphere are kept closed at all times, except when required to be open for proper operation or maintenance.

(3) backwash from all filters, other than diatomaceous earth types, is treated in a still or muck cooker so that the perchloroethylene content of the residue does not exceed 60 percent, by weight.

(4) backwash from all diatomaceous earth type filters is treated in a still or muck cooker so that the residue contains no more than 25 percent perchloroethylene, by weight.

(5) cartridge-type filters are drained in the filter housing for at least 24 hours before discarding the cartridges or for at least 12 hours, provided that drained cartridges are dried in a dryer which is equipped with perchloroethylene control equipment approved by the Executive Officer.

(6) all waste containing perchloroethylene is stored in sealed containers and disposed in accordance with local, state, and federal regulations.

c) Control Equipment Requirements

A person shall not operate any perchloroethylene dry cleaning facility unless all vents from dry cleaning equipment and floor pickups are vented through a control device

approved in writing by the Executive Officer. The control equipment shall meet one of the following conditions.

(1) The concentration of perchloroethylene at the outlet of a carbon adsorber shall not exceed 100 ppm as measured over a period of one minute before dilution; or

(2) The air temperature at the outlet of a refrigerated condenser must reach 45°F or less during the cool-down period. A temperature gauge with a minimum range from OOF to 150°'F must be installed on the condenser outlet duct; or

(3) The demonstrated control efficiency for any other control device must be 90 percent or greater, by weight, prior to the discharge to the atmosphere measured over a complete control cycle, based upon the amount of perchloroethylene entering the control device.

(d) Recordkeeping Requirements

A person operating a perchloroethylene daily cleaning facility shall maintain daily records of perchloroethylene purchase and use, and equipment maintenance and repair information. Records shall be maintained at the facility for at least two years and be made available to the District upon request.

(e) Test Methods

Efficiency of the control device shall be determined according to EPA Method 18.

(f) Compliance Determination

Compliance with liquid leak requirements in subparagraph (b)(1) of this rule shall be determined by means of visual inspection of the following components:

(1) hose connection, union, coupling and valves;
(2) machine door gaskets and seatings;
(3) filter head gasket and seating;
(4) pumps;
(5) base tanks and storage container;
(6) water separators;
(7) filter sludge recovery;
(8) distillation unit;
(9) diverter valves;
(10) saturated lint from lint basket; and
(11) cartridge filters.

(g) Exemptions

The provisions of paragraph (c) shall not apply to facilities using less than 1,210 liters (320 gallons) per year of perchloroethylene.

(Adopted January 6, 1978)(Amended August 3, 1979)(Amended July 11, 1980)
(Amended August 3, 1990)(Amended December 7, 1990)
(Amended November 17, 2000)

RULE 1102. DRY CLEANERS USING SOLVENT OTHER THAN PERCHLOROETHYLENE

(a) Applicability

This rule applies to all persons owning or operating a dry cleaning facility using solvent other than perchloroethylene.

(b) Definitions

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

(1) CARTRIDGE FILTER means a replaceable perforated canister that contains paper, activated carbon, or a combination of paper and activated carbon and that is used in a pressurized system in conjunction with piping and ductwork, to trap and remove contaminants such as solid particles and fugitive dyes from soil-laden solvent. A cartridge filter contains no diatomaceous earth or activated clay. Cartridge filters include, but are not limited to: standard filters, split filters, "jumbo" filters, and all carbon polishing filters.

(2) CLOSED-LOOP MACHINE means dry cleaning equipment in which washing, extraction, and drying are performed in the same single unit and which re-circulates and recovers the solvent-laden vapor.

(3) CONDENSER means a closed-loop vapor recovery system into which solvent vapors are introduced and trapped by using a chilling system, with or without refrigeration, to cool the outlet temperature.

(4) COOL DOWN means the portion of the drying cycle that begins when the heating mechanism deactivates and a condenser, chilling coils or some other cooling device activates to reduce the temperature of the air re-circulating through the drum to reduce the concentration of solvent in the drum.

(5) DIP TANK means a vessel or container that is separate from dry cleaning equipment, in which materials are immersed in solution that contains solvent for purposes other than dry cleaning.

(6) DISTILLATION UNIT OR STILL means a device used to volatilize, separate and recover solvent from contaminated solvent.

(7) DISTRICT is as defined in Rule 102.

(8) DRUM means the rotating cylinder or wheel of the dry cleaning machine that holds the materials being cleaned, extracted or dried.

(9) DRYING CABINET means a separate housing unit from the washer or extractor, to which wet, solvent-laden materials, that would otherwise be damaged by the heat and tumbling action of the drying cycle are transferred for drying.

(10) DRYING CYCLE means the process used to actively remove the solvent remaining in the materials after washing and extraction. The drying cycle begins when heating coils are activated and ends when the machine ceases rotation of the drum. For closed-loop machines, the heated portion of the drying cycle is followed by cool down.

(11) EXEMPT COMPOUNDS are defined in Rule 102.

(12) GALLONS OF SOLVENT USED means the volume of solvent, in gallons, introduced into the dry cleaning equipment, and not recovered at the facility for re-use on-site in the dry cleaning equipment, over a specified time period.

(13) GROUP II EXEMPT COMPOUNDS are defined in Rule 102.

(14) LIQUID LEAK means an emission of solvent from openings in the dry cleaning equipment as a visible mist or at the rate of more than one (1) drop every three (3) minutes, as determined by visual inspection.

(15) MATERIALS mean wearing apparel, draperies, linens, fabrics, textiles, rugs, leather, and all other goods that are being dry cleaned.

(16) NON-HALOGENATED HYDROCARBON DETECTOR means a portable device capable of detecting vapor concentrations of solvent of 250 ppm by volume or less and indicating an increasing concentration by emitting an audible signal or visual indicator that varies as the concentration changes.

(17) PORTABLE HYDROCARBON ANALYZER means a portable device which uses the flame ionization detection or thermal conductivity methods and satisfies EPA Method 21, 40 CFR Part 60, to analyze hydrocarbon vapor concentrations. The instrument shall be equated to calibrating on methane and sampling at one liter per minute.

(18) PRE-WASH WEIGHT OF MATERIALS CLEANED PER LOAD means the total dry weight, in pounds, of the materials in each load dry cleaned at the facility, as determined by weighing each load on a scale prior to dry cleaning.

(19) SETTLING TANK means a container which gravimetrically separates oils, grease, dirt and any other contaminants from solvent.

(20) SOLVENT, for the purpose of this rule only, means a substance, including any detergents and additives, containing volatile organic compounds (VOC) or Group II exempt compound other than perchloroethylene that is used to dry clean materials and that exists as a liquid under standard conditions.

(21) SOLVENT DRY CLEANING EQUIPMENT OR DRY CLEANING EQUIPMENT means any machine, device, or apparatus used to dry clean materials with solvent or to remove residual solvents from previously cleaned materials. Dry cleaning equipment may include, but is not limited to, a transfer machine, a closed-loop machine, a solvent recovery dryer, washer tumblers, extractors, dryers, reclaimers, condensers, chillers, heating coils, chilling coils, filters, purification systems, settling tanks, separators, stills, waste disposal systems, holding tanks, pumps, flanges, valves and associated piping.

(22) SOLVENT DRY CLEANING FACILITY OR DRY CLEANING FACILITY is any facility engaged in the dry cleaning of materials using solvent.

(23) SOLVENT DRY CLEANING OR DRY CLEANING, for the purpose of this rule only, means the process used to remove soil, greases, paints, odors, and other unwanted substances from materials with a solvent.

(24) SOLVENT DRY CLEANING SYSTEM OR DRY CLEANING SYSTEM includes, but is not limited to, all of the following equipment, devices, or apparatus associated with the solvent dry cleaning process: dry cleaning equipment; filter or purification systems; waste holding, treatment, or disposal systems; solvent supply systems and storage tanks; pumps; gaskets; piping, ducting, fittings, valves, or flanges that convey solvent-contaminated air; and pollution control systems.

(25) SOLVENT RECOVERY DRYER, DRYER, RECLAIMER, OR RECLAIMER DRYER is a class of dry cleaning dryers that employs a condenser or other cooling device to liquefy and recover solvent vapors evaporated in a closed-loop, re-circulating stream of air.

(26) SPIN-DISC FILTER means a filter that traps and removes contaminants such as solid particles and fugitive dyes from soil-laden solvent and that can be cleaned, regenerated, and reused in closed-loop machines.

(27) TRANSFER CART is a cart or container used for the transfer of wet solvent-laden materials from the washer to the dryer or to the drying cabinet that has a lid and walls which are impervious to the solvent.

(28) TRANSFER MACHINE means a combination of solvent dry cleaning equipment in which washing and extraction are performed in one unit and drying is performed in a separate unit.

(29) VAPOR LEAK means an emission of solvent vapor from openings in the dry cleaning equipment which causes bubbling from the application of a soap solution, causes a portable analyzer to exceed 250 ppm as methane, as determined by EPA Method 21, or causes a non-halogenated hydrocarbon detector to emit an audible signal or visual signal.

(30) VOLATILE ORGANIC COMPOUND (VOC) is as defined in Rule 102.

(31) WASTE WATER EVAPORATOR means a device that vaporizes solvent contaminated waste water through the addition of thermal or chemical energy, or through physical action.

(32) WATER-REPELLING OPERATIONS means the treatment of materials with a solution that contain solvent to create a coating that repels water.

(c) Compliance Schedule

The owner or operator shall comply with the following:

(1) Effective January 1, 2001, a person shall not operate a dip tank.

(2) Effective January 1, 2001, a person shall not operate a drying cabinet.

(3) Effective July 1, 2001, a person shall not open a closed-loop machine prior to completion of the drying cycle.

(4) Effective January 1, 2003, a person shall not operate a transfer machine unless the requirements in either subparagraph (c)(4)(A) or subparagraph (c)(4)(B) are met:

(A) The owner or operator:

(i) submits to the Executive Officer a complete application by January 1, 2001 to obtain a permit condition that limits the quantity of solvent used to no more than 15 gallons per month;

(ii) demonstrates that the transfer machine has been operating in compliance for at least two years prior to November 17, 2000; and,

(iii) actually operates the transfer machine such that the solvent usage is no more than fifteen (15) gallons per month on and after January 1, 2001.

(B) The transfer machine is cleaning reusable soiled textile materials meeting the requirements of Health and Safety Code §25144.6(b) and the facility meets the requirements of Health and Safety Code §25144.6 (c).

(5) Effective January 1, 2005, a person shall not operate any transfer machine.

(d) Equipment Specifications and Operating Requirements

The owner or operator shall operate and maintain the solvent dry cleaning system in accordance with the requirements of this subdivision, the conditions specified in the facility's permit, and in accordance with the manufacturer's recommendations. A person shall not operate a solvent dry cleaning facility except in accordance with the compliance dates established in subdivision (c) of this rule and in accordance with the following:

(1) General Specifications

(A) All washer lint traps, button traps, access doors, and other parts of the equipment where solvent may be exposed to the atmosphere shall be kept closed at all times except when required for proper operation or maintenance.

(B) Button and lint traps shall be cleaned each working day.

(C) The still residue, used filtering material, lint, used solvent and all other wastes containing solvent shall be stored in sealed containers until properly transported for disposal.

(D) For any dry cleaning system that is equipped with cartridge filters containing paper or carbon or a combination thereof, the cartridge filters shall be fully drained in a sealed filter housing for at least 24 hours before removal.

(E) All solvents shall be stored in closed containers.

(F) All parts of the dry cleaning system where solvent may be exposed to the atmosphere or workroom shall be kept closed at all times except when access is required for proper operation and maintenance.

(G) Waste water evaporators shall be operated to ensure that no liquid solvent or visible emulsion is allowed to vaporize to the atmosphere.

(2) Additional Specifications for Closed-Loop Machines

(A) A closed-loop machine shall not exhaust to the atmosphere or workroom during operation except when the vacuum pump exhausts to maintain a continuous vacuum.

(B) For any closed-loop machine that is not equipped with a locking mechanism, the operator shall not open the door of a closed-loop machine prior to completion of the drying cycle.

(C) For any closed-loop machine that is equipped with a locking mechanism, the operator shall not inactivate the locking mechanism and open the door of a closed-loop machine prior to completion of the drying cycle.

(3) Additional Specifications for Transfer Machines

(A) Materials which have been dry cleaned shall be transferred to the dryer by hand or in an enclosed transfer cart within five minutes after they are removed from the washer.

(B) The washer doors shall not be opened to transfer materials which have been dry cleaned unless there are an adequate number of dryers ready to take up the washed load.

(C) The solvent recovery dryer shall remain closed until there is no visible flow in the sight glass of the condenser for at least one minute.

(D) A solvent recovery dryer or an equivalent control device that reduces VOC emissions from drying tumblers by at least 90 percent by weight shall be installed and operated.

(E) The overall gallons of solvent used shall be less than 4.5 pounds per 100 pounds of materials dry cleaned.

(e) Leak Check and Repair Requirements

(1) No less frequently than monthly, the owner or operator shall inspect the dry cleaning system for liquid and vapor leaks, including, but not limited to, the following:

(A) hose connections, unions, couplings, valves, and flanges;

(B) machine door gasket and seating of the machine cylinder;

(C) filter head gasket and seating;

(D) pumps;

(E) base tanks and storage containers;

(F) water separators;

(G) filter sludge recovery;

(H) seals and gaskets of distillation unit(s);

(I) diverter valves;

(J) saturated lint from lint trap basket;

(K) button trap lid;

(L) cartridge or other types of filters;

(M) seals, gaskets and the diverter valve of the refrigerated condenser;

(N) exhaust stream ducts;

(O) lint trap ducts; and,

(P) gaskets and ducts of the carbon adsorber.

(2) To inspect for a vapor leak, the operator shall use at least one of the following techniques:

(A) soap bubble technique in accordance with the procedures in EPA Method 21, Section 4.3.3 – Alternative Screening Procedure; or

(B) a non-halogenated hydrocarbon detector; or

(C) a portable hydrocarbon analyzer or an alternative method approved by the District.

(3) To inspect for a liquid leak, the operator shall visually inspect the equipment for liquid leaking in a visible mist or at the rate of more than one drop every three minutes.

(4) Any liquid leak or vapor leak that has been detected by the operator shall be repaired within three (3) working days of detection. If repair parts are not available at the facility, the parts shall be ordered within two working days of detecting such a leak and the operator shall provide written notification to the Executive Officer that explains the reason(s) for delaying the leak repair. Such repair parts shall be installed within five working days after receipt. A facility with a leak that has not been repaired by the end of the seventh (7th) working day after detection shall not operate the dry cleaning equipment, until the leak is repaired.

(f) Recordkeeping and Reporting Requirements

(1) For each dry cleaning machine operated during a specified reporting period, the owner or operator shall maintain records containing:

(A) a log showing the date and the pre-wash weight, in pounds, of materials cleaned per load;

(B) purchase and delivery receipts for the solvent;

(C) for those facilities with solvent tanks that are not directly filled by the supplier upon delivery, a log showing the date(s) and amount, in gallons, of solvent added to the solvent tank of each dry cleaning machine;

(D) the inventory of solvent, in gallons, at the start and end of the reporting period;

(E) the amount, in gallons, of solvent used;

(F) a log showing the dates of leak inspections;

(G) for any liquid leak or vapor leak that is detected, a log showing the dates of detection and repair, the location of the leak, and the action taken to repair the leak; and,

(H) the calculated facility mileage, determined from all solvent additions in the reporting period, as follows:

$$\frac{\text{Total Weight, in pounds, of Materials Cleaned Per Load}}{\text{Total Quantity, in gallons, of Solvent Used}}$$

(2) All records shall be maintained pursuant to Rule 109.

(g) 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.

(h) Exemptions

(1) Dry cleaning equipment which exclusively uses perchloroethylene as the cleaning solvent is exempt from this rule.

(2) Dry cleaning equipment which exclusively uses a Group II exempt compound other than perchloroethylene as the cleaning solvent is exempt from subdivisions (c), (d), (e), and (g) and subparagraphs (f)(1)(F) and (f)(1)(G) of this rule provided that the detergents and additives used with these substances contain less than 50 grams per liter VOC.

(3) Professional laundering equipment that uses liquid carbon dioxide as the cleaning solvent, provided that the detergents and additives used with these

substances contain less than 50 grams per liter VOC, is exempt from this rule.

(4) Professional wet cleaning equipment that uses water as the cleaning solvent, provided that the detergents and additives used with these substances contain less than 50 grams per liter VOC, is exempt from this rule.

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

(Adopted April 6, 1980) (Amended December 7, 1990)
(Amended March 12, 1999)

RULE 1103. PHARMACEUTICALS AND COSMETICS MANUFACTURING OPERATIONS

(a) Applicability

The purpose of this rule is to reduce VOC emissions from; and the provisions of this rule shall apply to:

(1) The manufacture of pharmaceutical and cosmetic products by chemical processes.

(2) The production and separation of medicinal chemicals such as antibiotics and vitamins from microorganisms.

(3) The manufacture of botanical and biological products by the extraction of organic chemicals from vegetable materials or animal tissues.

(4) The formulation of pharmaceuticals into various dosage forms such as tablets, capsules, injectable solutions or ointments, that can be taken by the patient immediately and in an accurate amount; and the formulation of cosmetics into configurations intended for consumer use.

(b) Definitions

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

(1) CAPTURE EFFICIENCY, in percent, is the ratio of the weight of the VOC in the effluent stream entering the control device to the weight of VOC emitted from pharmaceutical or cosmetic manufacturing operations, both measured simultaneously, and shall be calculated by the following equation:

Capture Efficiency = [Wc/We] x 100
Where: Wc = weight of VOC entering control device
We = weight of VOC emitted from the process

(2) CONTROL DEVICE EFFICIENCY, in percent, is the ratio of the weight of the VOC removed by the control device from the effluent stream entering the control device to the weight of VOC in the effluent stream entering the control device, both measured simultaneously, and shall be calculated by the following equation:

Control Device Efficiency = [(Wc-Wa)/Wc] x 100
Where: Wc = Weight of VOC entering control device
Wa = Weight of VOC discharged from the control device

(3) COSMETICS MANUFACTURING PLANT is any plant producing or blending chemicals for use in cosmetic products and/or manufacturing cosmetic products by chemical processes.

(4) EXEMPT COMPOUNDS See Rule 102 - Definition of Terms are any of the following compounds that have been determined to be non-precursors of ozone:

(5) IN-PROCESS TANKS are containers used for mixing, blending, heating, reacting, holding, crystallizing, evaporating, or cleaning operations in the manufacture of pharmaceuticals or cosmetics.

(6) KEY SYSTEM OPERATING PARAMETER is an emission control system operating parameter, such as temperature, flow rate or pressure, that ensures operation of the abatement equipment within manufacturer specifications and compliance with the standards in Paragraphs (d)(1), (d)(2), and (d)(3).

(7) LIQUID LEAK is the dripping of liquid volatile organic compounds at the rate of more than three drops per minute.

(8) PHARMACEUTICAL MANUFACTURING PLANT is any plant producing or blending chemicals for use in pharmaceutical products and/or manufacturing pharmaceutical products by chemical processes with the Standard Industrial Classification of 2833, 2834, 2835, and 2836.

(9) PRODUCTION EQUIPMENT is any equipment using or emitting VOC that is used in the manufacture of cosmetics or pharmaceuticals and is not exempt from permits pursuant to Rule 219 and does not include reactors, distillation columns, crystallizers and centrifuges which are subject to Subdivision (c) of this rule.

(10) TOTAL VOC VAPOR PRESSURE is the sum of the vapor pressures of each of the compounds defined as VOCs.

VOC Composite Total Pressure is calculated as follows:

Undisplayed Graphic

Where:

Wc = Weight of VOC entering control device

W_i = Weight of the "i"th VOC compound, in grams (g)

W_w = Weight of water, in grams (g)

W_e = Weight of exempt compound, in grams (g)

MW_i = Molecular weight of the "i"th VOC compound, in $\frac{G}{g\text{-mole}}$

MW_w = Molecular weight of water, in $\frac{G}{g\text{-mole}}$

MW_e = Molecular weight of exempt compound, in $\frac{g}{g\text{-mole}}$

TP_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

(11) VOLATILE ORGANIC COMPOUND (VOC) is any chemical compound containing the element carbon, excluding methane, carbon monoxide, carbon dioxide, carbonic acid, metallic carbides and carbonates, ammonium carbonate, and exempt compounds.

(c) Equipment Requirements

(1) An owner/operator shall not use reactors, distillation columns, crystallizers, or centrifuges emitting more than 15 pounds per day of VOC for each permit unit unless the vents are equipped with surface condensers or equivalent control devices as specified under Subparagraph (c)(1)(B).

(A) An operator shall not use surface condensers for the control of organic gases unless the condenser outlet gas temperature is controlled as shown in the following table:

Total Vapor Pressure of VOC at 20°C	Maximum Condenser Outlet

	Gas Temperature
0.5 psi to 1.0 psi	25oC
> 1.0 psi to 1.5 psi	10
> 1.5 psi to 2.9 psi	0
> 2.9 psi to 5.8 psi	- 15
over 5.8 psi	- 25

(B) An equivalent control devices may be used with the approval of the Executive Officer. Equivalent control is achieved when VOC emissions are reduced by at if it can achieve the equivalent percent of VOC condensed as determined by the method outlined in Subsection 4.1.1 (Condenser Performance) of Section 4.0 "Performance of Control Systems" in the EPA Document No. EPA-450/2-78-029 "Control of Volatile Organic Emissions from Manufacture of Synthesized Pharmaceutical Products" December 1978. A condensed version of this method is shown below.

The percent of VOC condensed shall be calculated with the following equation:

Undisplayed Graphic

Where PC = percent of VOC condensed

MFS_1 = mole fraction VOC into condenser

MFS_2 = mole fraction VOC out of condenser

Mole fraction of VOC in the condenser inlet and outlet shall can be determined by chemical analysis or by dew point method as described in EPA document "Control of Volatile Organic Emissions from Manufacture of Synthesized Pharmaceutical Products," Report No. EPA-450/2-78-029, Section 4.0 "Performance of Control Systems," pages 4-2 through 4-6.

(2) An operator shall not use centrifuges, rotary vacuum filters, or any other filters, or devices having an exposed liquid surface where the liquid contains VOC having a total VOC vapor pressure of 0.5 psi or more at 20°C, unless such devices incorporate a hood or enclosure with a delivery system or ductwork to collect VOC emissions, exhausting to a control device which meets the applicable requirements in either Paragraphs (d)(1) or (d)(2) of this rule.

(3)An operator shall not use in-process tanks for material containing VOC unless an apparatus or cover which prevents VOC evaporation is provided for the tank. The cover shall be closed or in place on the tank at all times except while loading or unloading the tank.

(d) Operating Requirements

An operator shall conform to the following operational requirements:

(1) If the basic permit unit for air dryers or production equipment including air dryers emits 330 pounds per day or more of volatile organic compounds, the emissions of such organic materials into the atmosphere shall be reduced by at least 90 percent by weight.

(2) If the basic permit unit for air dryer or production equipment including air dryers emits less than 330 pounds per day of volatile organic compounds, the emissions of such organic materials into the atmosphere shall be reduced to less than 33 pounds per day.

(3) An operator shall not transfer VOC having a total VOC vapor pressure greater than 4.1 psi at 20 ^{o}C, from any

truck or rail car into any storage tank of a 2,000 gallon capacity or greater, unless VOC emissions during transfer are reduced by 90 percent by weight.

(4) An operator shall install pressure/vacuum vents set at +0.03 psig on all storage tanks that store VOC with a total VOC vapor pressure greater than 1.5 psia at 20oC.

(5) An operator shall repair all liquid leaks from which a liquid, containing VOC, can be observed to be running or dripping. The repair shall be completed the first time the equipment is off-line for a period of time long enough to complete the repair within 24 hours after the detection of the leak.

(e) Recordkeeping Requirements
Any person subject to Subdivisions (c) and (d) of this rule shall:

(1) Maintain a current list of organic compounds in use including the vapor pressure of each compound at 20°C.

(2) Record on a daily basis the types and amounts of organic compounds in use.

(3) Record on a daily basis approved emission control system key system operating parameters as defined in Paragraph (b)(6).

(4) Records shall be retained at the facility for at least two years and be made available to the AQMD upon request.

(5) Facilities subject to Title V shall retain records at the facility for at least five years and make those records available to the AQMD upon request.

(f) Test Methods

(1) The calculation of emission reduction required in Paragraphs (d)(1) and (d)(2) shall be determined based on both the capture efficiency and control device efficiency as specified by the following:

(A) Capture efficiency 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 EPA, CARB, and AQMD Executive Officer may be substituted.

(B) Control device efficiency is based on the weight of VOC removed compared to the weight of VOC entering the device. The weight of VOC, measured and calculated as carbon, shall be determined by the USEPA Test Methods 25, 25A, or AQMD Method 25.1 (Determination of Total Gaseous Non-Methane Organic Emissions as Carbon) as applicable. EPA Test Method 18, or CARB Method 422 shall be used to determine emissions of exempt compounds.

(2) The determination of the vapor pressure of a VOC compound shall be determined by using values in scientifically recognized published reference works or by testing using method ASTM Method D2879 when such reference works are not available.

(g) Exemptions
The provisions of this rule shall not apply to the following:

(1) Facilities that emit, at the design production rating, 15 pounds per day or less of volatile organic compounds; and,

(2) Sterilizers regulated by Rule 1405 - Control of Ethylene and Chlorofluorocarbon Emissions from Sterilizers or Fumigation Processes.

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

(Adopted April 7, 1978)(Amended December 7, 1984)(Amended May 5, 1989)
(Amended March 2, 1990)(Amended December 7, 1990)(Amended March 1, 1991)
(Amended August 2, 1991)(Amended August 13, 1999)

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 (See Rule 102 - Definition of Terms)

(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:

Grams of VOC per Liter of Coating, Adhesives, or Inks, Less Water and Less Exempt Compounds =

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 product~~s~~, 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) SOLVENT CLEANING OPERATION is 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.

(20) VOLATILE ORGANIC COMPOUND (VOC) (See Rule 102 - Definition of Terms)

(21) WATER-REPELLENT PRESERVATIVE is a penetrating coating designed to protect bare wood from mildew, decay, insect attack, and water staining.

(22) WOOD FLAT STOCK is defined as interior 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) VOC Requirements

Wood flat stock coatings, inks, and adhesives for interior wood panels and exterior wood siding, shall contain no more than 250 grams of VOCs per liter of coating, ink, or adhesive (2.1 pounds per gallon), less water and exempt compounds. Notwithstanding the above, up until January 1, 2000, wood flat stock inks and exterior wood siding coatings may contain up to 300 grams of VOCs per liter of ink (2.5 pounds per gallon) and up to 350 grams of VOCs per liter of coating (2.9 pounds per gallon), respectively, less water and less exempt compounds.

(2) Application Methods

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:

(A) Flow Coater, Roll Coater, or Dip Coater; or

(B) Hand Application Methods; or

(C) High-Volume, Low-Pressure (HVLP) or Electrostatic Application

(3) 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 solvent cleaning operations shall be carried out pursuant to Rule 1171 - Solvent Cleaning Operations.

(4) Control Equipment Requirements

Any person owning or operating a 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."

(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.

(Adopted November 7, 2003)

RULE 1105.1 REDUCTION OF PM_{10} AND AMMONIA EMISSIONS FROM FLUID CATALYTIC CRACKING UNITS

(a) Purpose

The purpose of this rule is to reduce emissions of PM_{10} and ammonia from fluid catalytic cracking units.

(b) Applicability

This rule applies to all existing, new or modified fluid catalytic cracking units at petroleum refineries.

(c) Definitions

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

(1) AMMONIA SLIP is the amount of unreacted ammonia emitted from a control equipment such as electrostatic precipitator, selective catalytic reduction, or selective non-catalytic reduction process, as collected and measured pursuant to the applicable reference test method listed in subdivision (f).

(2) CONDENSABLE PM_{10} is the PM_{10} collected in the impingers of the applicable reference test method listed in subdivision (f).

(3) CONTACT MATERIAL is any substance formulated to remove metals, sulfur, nitrogen, or any other contaminants from petroleum derivatives.

(4) FILTERABLE PM_{10} is the PM_{10} collected on the cyclone exit, probe, and filter(s) of the applicable reference test method(s) listed in subdivision (f).

(5) FLUID CATALYTIC CRACKING UNIT (FCCU) is a process unit in which petroleum derivative feedstock is charged and fractured into smaller molecules in the presence of a catalyst; or reacts with a contact material to improve feedstock quality for additional processing; and the catalyst or contact material is regenerated by burning off coke and other deposits. The unit includes, but is not limited to, the riser, reactor, regenerator, air blowers, spent catalyst, and all equipment for controlling air pollutant emissions and recovering heat.

(6) FLUID CATALYTIC CRACKING UNIT REGENERATOR is the portion of the fluid catalytic cracking unit in which coke burn-off and

catalyst regeneration occurs, and includes the regenerator combustion air blower(s).

(7) FRESH FEED is any petroleum derivative feedstock stream charged directly into the riser or reactor of a FCCU except for petroleum derivatives recycled within the FCCU.

(8) PETROLEUM REFINERY is any facility engaged in producing gasoline, kerosene, distillate fuel oils, residual fuel oils, lubricants, or other products through fractionation or straight distillation of crude oil, redistillation of unfinished petroleum derivatives, cracking or other processes, as defined in the Standard Industrial Classification Manual as Industry No. 2911, Petroleum Refining.

(9) SHUT-DOWN is a period which begins when fresh feed is pulled from the FCCU reactor and ends when the main blower for catalyst recirculation is shutdown.

(10) START-UP is a period not to exceed one hundred twenty (120) hours which begins with the startup of the main blower for introduction of catalyst and ends when fresh feed is introduced to the FCCU reactor and the process reaches steady state

(d) Emission Limits

(1) The operator shall not operate the FCCU unless, by December 31, 2006, the operator complies with one of the PM_{10} emission limits that the operator has elected, and the ammonia slip limit shown below; and has demonstrated to the Executive Officer that the PM_{10} and ammonia emissions from the FCCU to the atmosphere, determined by the test methods listed in subdivision (f), are equal to or less than one of the following elected PM_{10} emission limits and ammonia limit:

(A) Filterable PM_{10}

(i) 3.6 pounds per hour, or

(ii) 0.005 grain per dry standard cubic foot of flue gas corrected to 3% O_2 dry, or

(iii) 2.8 pounds per thousand barrels of fresh feed.

(B) Ammonia slip - 10 ppmv corrected to 3% O_2 dry, averaged over 60 consecutive minutes.

(2) The operator may request an extension of the compliance date specified in paragraph (d)(1) up to December 31, 2008 for the purpose of

synchronizing the installation of the PM_{10} control equipment with the FCCU turnaround provided that the operator submits a request in writing to the Executive Officer no later than July 1, 2006 and receives a written approval from the Executive Officer by December 31, 2006. For an FCCU turnaround starting before December 31, 2008 that cannot be completed by that date, the Executive Officer may approve an additional extension of the compliance date up to ninety (90) days after start-up of the FCCU for the operator to conduct performance testing for the required demonstration, so long as the FCCU operates with all necessary control equipment to meet the emission limits in paragraph (d)(1).

(3) The operator shall submit a permit application to include one or more selected emission limit(s) to comply with subparagraph (d)(1)(A) at least thirty (30) calendar days prior to the compliance date. The operator shall also conduct a performance test pursuant to paragraph (e)(1) to demonstrate compliance with the selected emission limit(s). The emission limit(s) selected shall be specified in the permit. The operator may change the selected emission limit(s) at any time provided that the operator has submitted an application for permit revision, conducted a performance test to demonstrate compliance, and received a revised Permit to Operate from the Executive Officer.

(4) If the operator does not make a selection pursuant to paragraph (d)(3), the operator shall be deemed to have selected the emission limit of 3.6 pounds per hour.

(e) Monitoring, Reporting and Recordkeeping Requirements

(1) Performance Testing

(A) If the operator constructs a new FCCU or modifies the FCCU to meet the emission limit(s) specified in paragraph (d)(1), the operator shall conduct a performance source test for PM_{10} and ammonia in accordance with the applicable source test methods listed in subdivision (f) and subparagraph (e)(1)(D) no later than 180 calendar days after initial start-up of the equipment not to exceed the applicable time limits specified in paragraph (d)(1) or paragraph (d)(2).

(B) The operator with an existing FCCU that already meets the emission limit(s) specified in paragraph (d)(1) shall conduct a

performance source test by July 1, 2006 to demonstrate compliance with the selected emission limit(s) in accordance with the applicable source test methods listed in subdivision (f) and subparagraph (e)(1)(D).

(C) The operator shall submit a source test protocol to the Executive Officer no later than sixty (60) calendar days before the proposed test date for the Executive Officer's approval. The operator shall include in the test protocol, at a minimum, the following information: the selected PM_{10} emission limit(s) to be complied with set forth in paragraph (d)(1), the selected operating parameters to be monitored for the control equipment to ensure compliance with the emission limit(s), the operating conditions of the FCCU, the identity of the testing lab, a statement from the testing lab certifying that it meets the criteria of Rule 304, and a description of all sampling and analytical procedures.

(D) The operator shall conduct the performance source test for PM_{10} emissions using SCAQMD Source Test Method 5.2 modified as in subparagraph (f)(1)(F) to determine the filterable PM_{10} emissions and the condensable PM_{10} emissions. The operator shall recover the PM captured in the cyclone and report the data for informational purposes only. The operator may elect to conduct a performance source test for PM emissions using SCAQMD Source Test Method 5.2, simultaneous with the performance source test for PM_{10} emissions to determine the ratio of filterable PM_{10} emissions to filterable PM emissions. Subject to the approval of the Executive Officer following an evaluation of a performace source test report, the operator may conduct subsequent annual compliance source tests for PM_{10} emissions using SCAQMD Source Test Method 5.2 and the above determined ratio. The operator shall conduct a performance source test for ammonia emissions concurrently with the performance source test for PM_{10} emissions.

(E) During the performance source test, the operator shall establish the operating levels for each parameter of the control equipment to be monitored pursuant to paragraph (e)(3). The operator shall monitor and record, at a minimum, all operating data for each

parameter, fresh feed rate, and flue gas flow rate and submit this data with the test report.

(F) The operator shall submit a complete test report to the Executive Officer no later than sixty (60) calendar days after completion of the source test.

(2) Compliance Testing

(A) The operator of any FCCU shall conduct, at a minimum, an annual compliance source test for PM_{10} and ammonia emissions in accordance with the test methods listed in subdivision (f) to demonstrate compliance with the selected emission limit(s) in subdivision (d). The operator shall conduct the compliance source tests for PM_{10} emissions concurrently with the compliance source test for ammonia emissions.

(B) During the annual compliance source test, the operator shall monitor and record, at a minimum, all operating data for the selected operating parameters of the FCCU control equipment, fresh feed rate and flue gas flow rate and submit this data with the test report.

(C) The operator shall conduct annual compliance source test(s) to determine the filterable and condensable PM_{10} emissions using SCAQMD Source Test Method 5.2 modified as in subparagraph (f)(1)(F). The operator may use SCAQMD Source Test Method 5.2 to determine the filterable PM emissions and estimate the filterable PM_{10} emissions using the ratio determined in the performance source test conducted pursuant to paragraph (e)(1).

(D) The operator shall conduct the first annual compliance source test in accordance with the approved source test protocol within sixty (60) calendar days after the compliance date specified in subdivision (d). For the first annual compliance source test, the operator shall submit a source test protocol to the Executive Officer no later than sixty (60) calendar days prior to the proposed test date for the Executive Officer's approval. The operator shall include in the test protocol the same information as required in subparagraph (e)(1)(C). The operator may use the performance source test as the first annual compliance source test if the performance source test is conducted within 180 calendar days

from the compliance date specified in subdivision (d). The operator need not submit a source test protocol for a subsequent annual compliance source test if the subsequent annual compliance source test will be conducted using the previously approved protocol.

(E) The operator shall conduct subsequent annual source tests within twelve (12) calendar months but no sooner than nine (9) calendar months from the date of completion of the previous annual source test.

(F) The operator shall submit a complete test report for any annual source test to the Executive Officer no later than sixty (60) calendar days of completion of the source test.

(G) Subject to the Executive Officer's approval, the operator may synchronize the timing of testing and submitting the test report required under subparagraphs (e)(2)(D) and (e)(2)(F) with the Relative Accuracy Test Audit (RATA) required under Rule 2011, *Requirements for Monitoring, Reporting, and Recordkeeping for Oxides of Sulfur (SO_x) Emissions*, and Rule 2012, *Requirements for Monitoring, Reporting, and Recordkeeping for Oxides of Nitrogen (NO_x) Emissions*, of Regional Clean Air Incentives Market (RECLAIM) program.

(3) Monitoring

(A) No later than May 7, 2004, the operator shall submit a plan, for Executive Officer approval, specifying the operating parameters to be monitored, the range of operating levels of each proposed parameter, and the frequency of monitoring and recording, for the control equipment of the FCCU installed and operated before November 7, 2003.

(B) With the application for permit to construct or modify the FCCU, the operator shall submit a plan, for Executive Officer approval, specifying the operating parameters to be monitored, the range of operating levels of each proposed parameter, and the frequency of monitoring and recording, for the control equipment of the FCCU constructed or modified after November 7, 2003.

(C) The operator shall select the operating parameters and frequency of monitoring and recording specified in Attachment A, or as an

alternative, the operator may propose other appropriate substitute parameters and frequencies for Executive Officer approval.

(D) The operator shall not be required to comply with the monitoring or recording requirements during a malfunction period or a planned routine maintenance period of the monitoring or recording device provided that:

(i) The malfunction period or the planned routine maintenance period of the monitoring or recording device does not exceed ninety-six (96) consecutive hours;

(ii) The monitoring or recording device has been either shutdown for a planned routine maintenance and the operator has provided a written notification to the Executive Officer at least two calendar weeks in advance; or by a mechanical or electrical failure or fire caused by circumstances beyond the operator's control; and

(iii) The operator has submitted a report to the Executive Officer within ninety-six (96) hours after the monitoring or recording device(s) returns to normal operation. Such written notification and report shall include information as prescribed by the Executive Officer including at a minimum the cause of the shutdown, the time the monitoring or recording device(s) became non-operational, the time or estimated time the monitoring or recording device(s) returned to normal operation, the maintenance performed or corrective and preventive actions taken to prevent future non-operational conditions

(4) Reporting

The operator shall report filterable PM_{10}, condensable PM_{10} and ammonia emissions measured according to the test method specified under subdivision (f) on an annual basis pursuant to paragraph (e)(2).

(5) Recordkeeping

The operator shall maintain all information required to demonstrate compliance in a manner approved by the Executive Officer for a period of at least five years and made available to the Executive Officer upon request.

(f) Source Test Methods and Calculation

(1) The operator shall use the following source test methods, as applicable, to determine the PM_{10} and ammonia emission rates. All source test methods referenced below shall be the most recent version issued by the respective organization.

(A) SCAQMD Source Test Method 1 – *Velocity and Sample Traverse Points*;

(B) SCAQMD Source Test Method 2 – *Stack Gas Flow Rate*;

(C) SCAQMD Source Test Method 3 – *Stack Gas Density*;

(D) SCAQMD Source Test Method 4 – *Stack Gas Moisture*;

(E) SCAQMD Source Test Method 5.2 - *Determination of Particulate Matter Emissions from Stationary Sources Using Heated Probe and Filter*;

(F) SCAQMD Source Test Method 5.2 modified to use an in-stack PM_{10} cut cyclone and operated at a constant sampling rate to sample PM_{10}, as specified in U.S. EPA Source Test Method 201A - *Determination of PM_{10} Emissions - Constant Sampling Rate Procedures*, 40 CFR Part 51, Appendix M. Analyses and calculations shall be performed according to SCAQMD Source Test Method 5.2, including those for the determination of the condensable PM_{10} portion;

(G) SCAQMD Source Test Method 207-1 - *Determination of Ammonia Emissions from Stationary Sources*;

(H) SCAQMD Source Test Method 10.1 - *Carbon Monoxide, Carbon Dioxide and Oxygen*; and

(I) SCAQMD Source Test Method 100.1 - *Nitrogen Oxides, Sulfur Dioxide, Carbon Monoxide, and Oxygen.*

(J) EPA Source Test Method 5 may be used in lieu of SCAQMD Method 5.2 modified.

(2) Source tests for PM and PM_{10} shall be taken and the average of the samples shall be used to determine the applicable emission rate in accordance with the following requirements:

(A) Simultaneous duplicate samples shall be obtained unless the operator demonstrates to the satisfaction of the Executive Officer that it is not physically feasible to do so, in which case the

operator shall take sequential triplicate samples;

(B) All samples must have minimum sampling volume of 120 cubic feet or a minimum filterable PM and PM_{10} catch of 6 milligrams per sample shall be collected;

(C) For duplicate samples, the source test shall be deemed invalid if the difference between the two samples is greater than 35% of the average of the two samples in the applicable units specified in subparagraph (d)(1)(A) and if the difference between the filterable sample catches normalized to the average sampling volume is greater than 3.5 milligrams. If the source test is deemed invalid, the test shall be repeated; and

(D) For triplicate samples, if the operator can demonstrate to the satisfaction of the Executive Officer that the process conditions, including but not limited to the throughput, the quantity, type, and quality of all feedstock to the FCCU, and the emission control equipment conditions have not changed throughout the sequential test period, then the operator may apply the Dixon outlier test at the 95% significance level to check for and discard one outlier, and shall use the average of the two remaining samples to determine filterable PM and PM_{10} emissions.

(3) The operator may use alternative or equivalent source test methods, as defined in U.S. EPA 40 CFR 60.2, if they are approved in writing by the Executive Officer, the California Air Resources Board, and the U.S. Environmental Protection Agency.

(4) The operator shall use a test lab approved under the SCAQMD Laboratory Approval Program for the source test methods cited in paragraph (f)(1) if such approved lab exists. If there is no approved lab, then approval shall be granted by the Executive Officer on a case-by-case basis.

(5) Any particulate emissions from existing CO boilers located downstream of existing electrostatic precipitators, existing as of November 7, 2003, may be excluded for the purpose of demonstrating compliance with the PM_{10} limit of paragraph (d)(1).

(g) Exemptions

(1) The operator shall not be required to comply with the emission limits specified under paragraph (d)(1) during planned startup and shutdown

periods related to the FCCU process turnaround provided that the operator utilizes the control equipment during these periods to the maximum extent possible, as demonstrated to the satisfaction of the Executive Officer, to minimize the PM_{10} emissions including drying, energizing the electrostatic precipitators, and using the electrostatic precipitators prior to filling the FCCU regenerator with catalyst, if applicable and considering the safe operation of the equipment. Each startup or shutdown period shall not exceed one hundred twenty (120) hours. The operator shall provide written notification to the Executive Officer at least two calendar weeks in advance of the beginning of the startup and shutdown period.

(2) The operator of control equipment designed and installed prior to November 7, 2003 meeting the emission limits specified under paragraph (d)(1) shall not be required to comply with the emission limits under paragraph (d)(1) during routine maintenance periods of the electrostatic precipitators provided that the maintenance period does not occur more than once per any twelve month consecutive period for a duration of not more than ten (10) consecutive days. The operator shall provide written notification to the Executive Officer at least two calendar weeks in advance of the maintenance period. The operator may extend the routine maintenance period to more than ten (10) consecutive days provided that the operator pays a mitigation fee of $8,800 per day for each day in excess of ten (10) days. The mitigation fee shall be submitted within ninety (90) calendar days after the end of the routine maintenance period.

(h) Alternative Compliance Provision

In lieu of complying with the PM_{10} emission limit in clause (d)(1)(A)(ii), the operator may comply with the emission rate of 0.006 grain per dry standard cubic foot of flue gas, corrected to 3% O_2 dry, provided that the operator has a compliance plan approved by the Executive Officer that demonstrates equivalent PM_{10} emission reductions commencing December 31, 2006 through the use of alternative compliance method(s). The operator shall submit a complete compliance plan by June 15, 2004. Equivalent PM_{10} emission reductions between 0.006 grain/dscf and 0.005 grain/dscf shall be determined as follows.

$$E_{pm10} = (0.006 - 0.005 \text{ grain/dscf})(F)(CF_{pm10})$$

where:

E_{pm10} = Equivalent PM_{10} emission reductions per year between 0.006 grain/dscf and 0.005 grain/dscf, tons/yr;

F = Maximum design exhaust flue gas flow rate, dscfm; and

CF_{pm10} = Conversion factor from grains per minute to tons per year = 0.038.

The Executive Officer shall approve or deny the compliance plan, or any amendments to the compliance plan, within 180 calendar days from the date the plan is deemed complete. The operator shall, at a minimum, submit a compliance plan that includes:

(A) A precise description of the alternative compliance method(s), including but not limited to, a listing of equipment that are the source of PM_{10} emissions, operation schedule and modes of operation of such equipment, control techniques for PM_{10} emissions, documents to support the control efficiency used in the plan, a quantification of emission reductions from each of the alternative compliance method(s), and date when such reductions are to be achieved;

(B) A demonstration that the emission reductions are surplus, enforceable, real, and sustainable. Surplus means that the emission reductions are not required by the control options identified in the most recent Air Quality Management Plan approved by the District Governing Board, and are not used by the operator to meet any other regulatory requirements. Enforceable means that the alternative compliance method(s) to achieve emission reductions can be verified by the Executive Officer. Real and sustainable means that the emission reductions can be measured by appropriate source test methods approved by the District, CARB and U.S. EPA, and sustainable during the implementation time frame of the alternative compliance method(s) as specified in the compliance plan;

(C) A demonstration that at least 50% of the required equivalent PM_{10}

emission reductions are obtained within five (5) kilometers from the outer boundaries of the facility; and

(D) A demonstration that the overall PM_{10} emission reductions provided by the alternative compliance method(s) are comprised of at least an 80% emission reduction in $PM_{2.5}$.

Attachment A

Operating Parameters and Frequency of Monitoring and Recording [1]

Operating Parameters	Monitoring Frequency	Recording Frequency
Dry (or Wet) Electrostatic Precipitators		
Flue gas inlet temperature to ESP	Continuously [2]	Hourly [3]
Flue gas flow rate	Continuously [2]	Hourly [3]
Voltage and current across ESP (or total power input)	Continuously [2]	Hourly [3]
Ammonia injection rate	Continuously [2]	Hourly [3]
Wet Scrubbers (or Wet Electrostatic Precipitators)		
Flue gas flow rate	Continuously [2]	Hourly [3]
Type of scrubbing liquid and average pH	Daily [4]	Daily [4]
Scrubbing liquid flow rate	Continuously [2]	Hourly [3]
SO_2 Reducing Catalyst Additives		
Type of SO_2 reducing catalyst	Once and when change occurs	Once and when change occurs
Addition rate of SO_2 reducing catalyst	Daily [4]	Daily [4]
Pickup factor (i.e. lbs SO_2 reduced per lbs of additives)	Once and when change occurs	Once and when change occurs
Baghouses		
Flue gas flow rate	Continuously [2]	Hourly [3]
Pressure drop	Continuously [2]	Hourly [3]
Flue gas inlet temperature	Continuously [2]	Hourly [3]

Note:

1. Monitoring and recording as shown in this attachment shall not be required during periods of routine maintenance and malfunction of monitoring and recording devices.
2. "Continuously Monitoring" means monitoring at least once every 15 minutes.
3. "Hourly Recording" means recording at least one measurement every hour.
4. "Daily Monitoring" and "Daily Recording" means monitoring and recording at least one measurement every day.

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

RULE 1105. FLUID CATALYTIC CRACKING UNITS - OXIDES OF SULFUR

(Adopted April 7, 1978)(Amended August 6, 1982)(Amended September 16, 1983)(Amended September 1, 1984)

(a) Requirements

A person shall not discharge into the atmosphere from any fluid catalytic cracking unit oxides of sulfur in excess of the following limits:

1. Until January 1, 1987, 139 kilograms (286 pounds) per thousand barrels of feed charged to the fluid catalytic cracking unit, as measured in the exhaust to the atmosphere and calculated as a mass emission rate of sulfur dioxide (SO_2) from the regenerator.
2. On and after January 1, 1987, 60 kilograms (132 pounds) per thousand barrels of feed charged to the fluid catalytic cracking unit, as measured in the exhaust to the atmosphere and calculated as a mass emission rate of sulfur dioxide (SO_2) from the regenerator.

(b) Compliance Schedule

The owner or operator of any existing fluid catalytic cracking unit which requires modifications to comply with paragraph (a)(2) shall be in compliance by January 1, 1987, and shall comply with the following increments of progress:

1. January 1, 1985.

   Submit to the Executive Officer for approval an application for permit to construct or a control plan which describes, at a minimum, the steps that will be taken to achieve compliance with the provisions of this rule.

2. March 1, 1985.

   Award the contract for an emission control system or issue orders for the purchase of component parts to accomplish emission control.

3. May 1, 1985.

   Initiate on-site construction or installation of emission control equipment.

4. November 1, 1986.

   Complete on-site construction or installation of emission control equipment.

(c) Compliance Determination

1. For determination of compliance with the emission limits of section (a): oxides of sulfur shall be expressed as sulfur dioxide (SO_2), and averaged over 60 consecutive minutes, or other longer averaging time specified by the Executive Officer.
2. Calculations of mass emission rate of sulfur oxides from the regenerator. Within thirty days after September 16, 1983, the owner or operator of a fluid catalytic cracking unit shall submit to the Executive Officer for approval all formulas necessary to calculated the mass emission rates of sulfur oxides form the regenerator per thousand barrels of feed. All variable parameters included in the formulas and necessary to calculate mass emissions of sulfur oxides from regenerators shall be measured and recorded at least once per shift and maintained in a manner specified by the Executive Officer. Daily records of sulfur oxides emission rates per thousand barrels of feed shall be submitted to the Executive Officer, within 30 days of the end of the month being reported.

(Adopted May 1, 1992)(Amended March 8, 1996)
(Amended June 13, 1997)(Amended February 12, 1999)

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)(10) 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 PRODUCT is 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.

(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 (See Rule 102-Definition of Terms).

(5) EXTREME HIGH GLOSS COATING is any coating which achieves at least 95 percent reflectance on a 60o 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:

Grams of VOC per Liter of Coating, Less Water

and Less Exempt Compounds =

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) 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.

(9) HIGH GLOSS COATING is any coating which achieves at least 85 percent reflectance on a 60o meter when tested by ASTM D 523-89.

(10) 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.

(11)PLEASURE CRAFT COATING is any marine coating, except unsaturated polyester resin (fiberglass) coatings, applied by brush, spray, roller, or other means to a pleasure craft.

(12) 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.

(13) SEALER is a low viscosity coating applied to bare wood to seal surface pores to prevent subsequent coatings from being absorbed into the wood.

(14) TEAK PRIMER is a coating applied to teak or previously oiled decks in order to improve the adhesion of a seam sealer to wood.

(15) TOPCOAT is any final coating applied to the interior or exterior of a pleasure craft.

(16) VARNISHES are clear wood topcoats formulated with various resins to dry by chemical reaction on exposure to air.

(17) 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 7/1/94	On or After 2/12/99	On or After 1/1/2001
Topcoats			
Extreme High Gloss	490	650	490
High Gloss	420	420	420
Pretreatment Wash Primers	780	780	780
Finish Primer/Surfacer	420	600	420
High Build Primer Surfacer	340	340	340
Teak Primer	775	775	775

Antifoulant Coatings			
Aluminum Substrate	560	560	560
Other Substrates	150	400	330
Clear Wood Finishes			
Sealers	550	550	550
Varnishes	490	490	490
Others	420	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) Solvent cleaning of coating application equipment, 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).

(3) 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 as defined in paragraph (b)(4) except for: methylene chloride; perchloroethylene; cyclic, branched, or linear, completely methylated siloxanes (VMS); or parachlorobenzotrifluoride (PCBTF).

(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 302 and 303 (SCAQMD "Laboratory Method of Analysis for Enforcement Samples" manual); or

(ii) SCAQMD Methods 304 - Determination of Volatile Organic Compounds (VOC) in Various Materials, 303 - Determination of Exempt Compounds, and 302 - Distillation of Solvents from Paints, Coatings and Inks (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) 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.

(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 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

The provisions of this rule shall not apply to aerosol coating products.

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

(Adopted November 4, 1988)(Amended May 5, 1989)(Amended June 2, 1989)
(Amended March 2, 1990)(Amended November 2, 1990)(Amended December 7, 1990)
(Amended August 2, 1991)(Amended January 13, 1995)

RULE 1106. MARINE COATING OPERATIONS

(a) Applicability

This rule applies to all coating operations of boats, ships, and their appurtenances, and to buoys and oil drilling rigs intended for the marine environment. Coating operations of vessels which are manufactured or operated primarily for recreational purposes are subject to the requirements of Rule 1106.1 - Pleasure Craft Coating Operations.

(b) Definitions

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

1. AEROSOL COATING PRODUCT is 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.
2. AIR DRIED COATING is any coating that is cured at a temperature below 90°C (194°F).
3. ANTENNA COATING is any coating applied to equipment and associated structural appurtenances which are used to receive or transmit electromagnetic signals.
4. ANTIFOULING COATING is any coating applied to the underwater portion of a vessel to prevent or reduce the attachment of biological organisms. An antifouling coating shall be registered with the Environmental Protection Agency (EPA) as a pesticide.
5. BAKED COATING is any coating that is cured at a temperature at or above 90°C (194°F).
6. ELASTOMERIC ADHESIVE is any adhesive containing natural or synthetic rubber.
7. 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)
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).

8. EXTREME HIGH GLOSS COATING is any coating which achieves at least 95 percent reflectance on a 60o meter when tested by ASTM Method D-523.
9. 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

$$\text{Water and Less Exempt Compounds} = \frac{Ws - Ww - Wes}{Vm - Vw - Ves}$$

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

10. HEAT RESISTANT COATING is any coating which during normal use must withstand temperatures of at least 204°C (400°F).
11. HIGH GLOSS COATING is any coating which achieves at least 85 percent reflectance on a 60° meter when tested by ASTM Method D-523.
12. HIGH TEMPERATURE COATING is any coating which must withstand temperatures of at least 426°C (800°F).
13. LOW ACTIVATION INTERIOR COATING is any coating used on interior surfaces aboard ships to minimize the activation of pigments on painted surfaces within a radiation environment.
14. MARINE COATING is any coating, except unsaturated polyester resin (fiberglass) coatings, containing volatile organic materials and applied by any means to ships, boats, and their appurtenances, and to buoys and oil drilling rigs intended for the marine environment.
15. METALLIC HEAT RESISTANT COATING is any coating which contains more than 5 grams of metal particles per liter of coating as applied and which must withstand temperatures over 80°C (175°F).
16. NAVIGATIONAL AIDS are buoys or other Coast Guard waterway markers.
17. PRETREATMENT WASH PRIMER is any coating which contains at least 1/2-percent acids, by weight, to provide surface etching and is applied directly to metal surfaces to provide corrosion resistance, adhesion, and ease of stripping.
18. REPAIR AND MAINTENANCE THERMOPLASTIC COATING is any resin-bearing coating, such as vinyl, chlorinated rubber, or bituminous coatings, in which the resin becomes pliable with the application of heat, and is used to recoat portions of a previously coated substrate which has sustained damage to the coating following normal coating operations.
19. SEALANT FOR WIRE-SPRAYED ALUMINUM is any coating of up to one mil (0.001 inch) in thickness of an

epoxy material which is reduced for application with an equal part of an appropriate solvent (naphtha, or ethylene glycol monoethyl ether).

20. SOLVENT CLEANING OPERATION is the removal of loosely held uncured adhesives, uncured inks, uncured coatings, and contaminants from parts, products, tools, machinery, equipment, and general work areas. Contaminants include, but are not limited to, dirt, soil, and grease. In a cleaning process which consists of a series of cleaning methods, each distinct method shall constitute a separate solvent cleaning operation.
21. SPECIAL MARKING COATING is any coating used for items such as flight decks, ships' numbers, and other safety/identification applications.
22. TACK COAT is an epoxy coating of up to two mils (0.002 inch) thick applied to an existing epoxy coating. The existing epoxy coating must have aged beyond the time limit specified by the manufacturer for application of the next coat.
23. TOUCH-UP COATING is any coating used to cover minor imperfections prior to shipment appearing after the main coating operation.
24. UNDERSEA WEAPONS SYSTEM is any or all components of a weapons system that is launched or fired underwater.
25. 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.
26. WIRE-SPRAYED ALUMINUM is any multi-aluminum coating applied to a steel substrate using oxygen fueled combustion spray methods.

(c) Requirements

1. VOC Content of Marine Coatings

   Except as otherwise provided in this rule, a person shall not apply a marine coating with a VOC content in excess of the following limits, expressed as grams of VOC per liter of coating as applied, less water and less exempt solvents:

COATING	**VOC LIMIT**	
	Baked	**Air Dried**
General Coating	275 g/L	340 g/L
Specialty Coating		
Heat Resistant	360	420
Metallic Heat Resistant		530
High Temperature		500
Pre-Treatment Wash Primer	780	780
Underwater Weapons Systems	275	340
Elastomeric Adhesives with 15%, by Weight, Natural or Synthetic Rubber		730
Solvent-Based Inorganic Zinc		650
Navigational Aids		340

Sealant for Wire-Sprayed Aluminum		610
Special Marking		490
Tack Coat		610
Low Activation Interior Coating		420
Repair and Maintenance Thermoplastic		550
Extreme High-Gloss Coating	420	490
Antenna Coating		530
Antifoulant		400
High Gloss	275	340

2. Approved Emission Control System

(A) Owners and/or operators may comply with the provisions of paragraph (c)(1) by using an emission control system, which has been approved in writing by the Executive Officer, for reducing VOC emissions. The control system must achieve a minimum capture efficiency using USEPA, ARB, and District methods specified in subparagraph (e)(4)(A) and a destruction efficiency of at least 85 percent by weight, and,

(B) The approved system shall reduce the VOC emissions, when using non-compliant coatings, to an equivalent or greater level that would be achieved by the provisions in paragraph (c)(1). The required efficiency of an emission control system at which an equivalent or greater level of VOC reduction will be achieved shall be calculated by the following equation:

$$C.E. = \left[1 - \left\{ \frac{(VOC_{LWc})}{(VOC_{LWn.Max})} \times \frac{1 - (VOC_{LWn.Max}/D_{n.Max})}{1 - (VOC_{LWc}/D_c)} \right\} \right] \times 100$$

Where: C.E. = Control Efficiency, percent

VOC_{LWc} = VOC Limit of Rule 1106, less water and less exempt compounds, pursuant to subdivision (c).

$VOC_{LWn.Max}$ = Maximum VOC content of non-compliant coating used in conjunction with a control device, less water and less exempt compounds.

$D_{n.Max}$ = Density of solvent, reducer, or thinner contained in the non-compliant coating, containing the maximum VOC content of the multicomponent coating.

D_c = Density of corresponding solvent, reducer, or thinner used in the compliant coating system = 880g/L.

3. Alternative Emission Control Plan

Owners and/or operators may achieve compliance with the requirements of paragraph (c)(1) by means of an Alternative Emission Control Plan pursuant to Rule 108.

4. Solvent Cleaning Operations; Storage and Disposal of VOC-containing Materials

   All solvent cleaning operations and the storage and disposal of VOC-containing materials used in solvent cleaning operations shall be carried out pursuant to Rule 1171 - Solvent Cleaning Operations.

5. Recordkeeping

   Notwithstanding the provisions of subdivision (g), records shall be maintained pursuant to Rule 109.

(d) Prohibition of Specification

1. A person shall not solicit or require any other person to use, in the d~~D~~istrict, any coating or combination of coatings to be applied to any marine vessel or marine component subject to the provisions of this rule that does not meet the limits requirements of this rule or of an Alternative Emission Control Plan approved pursuant to the provisions of paragraph (c)(3) of this rule.
2. The requirements of paragraph (d)(1) shall apply to all written or oral agreements executed or entered into after November 4, 1988.

(e) Test Methods

1. Determination of VOC Content

   The VOC 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 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 subdivision (c), only when manufacturers specify which individual compounds are used in the coating formulation. In addition, the manufacturers shall identify the USEPA, California Air Resources Board, and the SCAQMD approved test methods used to quantify the amount of each exempt compound

2. Determination of Metal Content

   The metal content in metallic coatings subject to the provisions of this rule shall be determined by the SCAQMD Method 311 (Analysis of Percent Metal in Metallic Coatings by Spectrographic Method) contained in the SCAQMD "Laboratory Methods of Analysis for Enforcement Samples" manual.

3. Determination of Acid Content

   The acid content of coating subject to the provisions of this rule shall be determined by ASTM D 1613-85 (Acidity in Volatile Solvents and Chemical Intermediates Used in Paint. Varnish, Lacquer, and Related Products) contained in the SCAQMD "Laboratory Methods of Analysis for Enforcement Samples" manual.

4. Determination of Efficiency of Emission Control System

   (A) The efficiency of the collection device of the emission control system as specified in paragraph (c)(2) 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 paragraph (c)(2) 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.

5. 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.

6. All test methods referenced in this section shall be the most recently approved version.

(f) Rule 442 Applicability

Any marine 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

The provisions of this rule shall not apply to:

1. marine coatings applied to interior surfaces of potable water containers.
2. touch-up coatings
3. marine coatings purchased before January 1, l992, in containers of one quart or less and applied to pleasure craft.
4. antifoulant coatings applied to aluminum hulls.
5. aerosol coating products.

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

RULE 1107. COATING OF METAL PARTS AND PRODUCTS

(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)
(Amended March 8, 1996)(Amended August 14, 1998)
(Amended November 17, 2000)(Amended November 9, 2001)
(Amended November 4, 2005)(Amended January 6, 2006)

(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. This rule does not apply to the coating of architectural components coated at the structure site or at a temporary unimproved location designated exclusively for the coating of structural components.

(b) Definitions

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

(1) AEROSOL COATING PRODUCT is 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.

(2) AIR-DRIED COATING is a coating that is cured at a temperature below 90°C (194°F).

(3) ALTERNATIVE EMISSION CONTROL PLAN is a plan that allows a source to demonstrate an alternative method of rule compliance, pursuant to Rule 108 - Alternative Emission Control Plans.

(4) BAKED COATING is a coating that is cured at a temperature at or above 90°C (194°F).

(5) CAMOUFLAGE COATING is a coating used, principally by the military, to conceal equipment from detection.

(6) 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.

(7) CATALYST is a substance that alters the rate of chemical reaction without participating in that reaction or changing during the course of reaction.

(8) 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.

(9) 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.

(10) DIP COATING is a method of applying coatings to a substrate by submersion into and removal from a coating bath.

(11) ELECTRIC-INSULATING VARNISH is a non-convertible-type coating applied to electric motors, components of electric motors, or power transformers, to provide electrical, mechanical, and environmental protection or resistance.

(12) ELECTRIC-INSULATING AND THERMAL-CONDUCTING COATING is a coating that displays an electrical insulation of at least 1000 volts DC per mil on a flat test plate and an average thermal conductivity of at least 0.27 BTU per hour-foot-degree-Fahrenheit.

(13) ELECTROCOATING is a process that uses coating concentrates or pastes added to a water bath. The coating is applied by using an electrical current in either an anodic or cathodic process.

(14) ELECTROSTATIC APPLICATION is a method of applying coating particles or coating droplets to a grounded substrate by electrically charging them.

(15) ESSENTIAL PUBLIC SERVICE COATING is a protective (functional) coating applied to components of power, water, and natural gas production, transmission or distribution systems during repair and maintenance procedures.

(16) 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.

(17) EXEMPT COMPOUNDS (see Rule 102-Definition of Terms).

(18) 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.

(19) 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.

(20) FLOW COAT is a non-atomized technique of applying coatings to a substrate with a fluid nozzle in a fan pattern with no air supplied to the nozzle.

(21) 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

(22) 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

(23) HAND APPLICATION METHODS is the application of coatings by manually held non-mechanically operated equipment. Such equipment includes paintbrushes, hand rollers, caulking guns, trowels, spatulas, syringe daubers, rags, and sponges.

(24) HARDENER is a substance or mixture of substances that controls the viscosity of the reactants and products of a chemical reaction; while participating in chemical reaction and becoming part of the product or products of chemical reaction.

(25) HEAT-RESISTANT COATING is a coating that must withstand a temperature of at least 400°F during normal use.

(26) 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.

(27) HIGH-TEMPERATURE COATING is a coating that is certified to withstand a temperature of 1000°F for 24 hours.

(28) HIGH-VOLUME, LOW-PRESSURE (HVLP) SPRAY is a coating application system 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 the air horns.

(29) INK is a fluid that contains dyes and/or colorants and is used to make markings but not to protect surfaces.

(30) MAGNETIC DATA STORAGE DISK COATING is a coating used on a metal disk which stores data magnetically.

(31) METAL PARTICLES are pieces of an elemental pure metal or a combination of elemental metals.

(32) 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.

(33) METALLIC COATING is a coating which contains more than 5 grams of metal particles per liter of coating, as applied.

(34) MIL is 0.001 inch.

(35) 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.

(36) 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.

(37) 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.

(38) MULTI-COMPONENT COATING is a coating requiring the addition of a separate reactive resin, commonly known as a catalyst or hardener, before application to form an acceptable dry film.

(39) ONE-COMPONENT COATING is a coating that is ready for application as it comes out of its container to form an acceptable dry film. A thinner, necessary to reduce the viscosity, is not considered a component.

(40) OPTICAL ANTI-REFLECTION COATING is 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.

(41) 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.

(42) PHOTORESIST COATING is a coating applied directly to a metal substrate to protect surface areas when chemical milling, etching, or other chemical surface operations are performed on the substrate.

(43) PHOTORESIST OPERATION is a process for the application and development of photoresist coating on a metal substrate, including preparation (except primary cleaning), soft bake, development, hard bake, and stripping, and can be generally subdivided as follows:

(A) NEGATIVE PHOTORESIST OPERATION is a process where the photoresist hardens when exposed to light and the unhardened photoresist is stripped, exposing the metal surface for etching.

(B) POSITIVE PHOTORESIST OPERATION is a process where the photoresist softens when exposed to light and the softened photoresist is stripped, exposing the metal surface for etching.

(44) PREFABRICATED ARCHITECTURAL COMPONENT COATINGS are coatings applied to metal parts and products which are to be used as an architectural structure.

(45) 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.

(46) 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.

(47) REPAIR COATING is a coating used to recoat portions of a product which has sustained mechanical damage to the coating following normal painting operations.

(48) ROLL COAT is a coating method using a machine that applies coating to a substrate by continuously transferring coating through a pair or set of oppositely rotating rollers.

(49) SAFETY-INDICATING COATING is a coating which changes physical characteristics, such as color, to indicate unsafe conditions.

(50) 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.

(51) SOLAR-ABSORBENT COATING is a coating which has as its prime purpose the absorption of solar radiation.

(52) 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.

(53) 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.

(54) TEXTURED FINISH is a rough surface produced by spraying and splattering large drops of coating onto a previously applied coating. The coatings used to form the appearance of the textured finish are referred to as textured coatings.

(55) TOUCH-UP COATING is a coating used to cover minor coating imperfections appearing after the main coating operation.

(56) 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.

(57) 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.

(58) VOLATILE ORGANIC COMPOUND (VOC) (see Rule 102-Definition of Terms).

(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 equipment operated according to the equipment manufacturer specifications, and by the use of one of the following methods:

(A) Electrostatic application, or

(B) Flow coat, or

(C) Dip coat, or

(D) Roll coat, 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 to be capable of achieving a transfer efficiency equivalent or better to the method listed in subparagraph (c)(1)(E) and for which written approval of the Executive Officer 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:

VOC LIMITS Less Water and Less Exempt Compounds Effective Dates								
Coating	**Air-Dried**				**Baked**			
	gm/l		**lb/gal**		**gm/l**		**lb/gal**	
	Current	**7/1/07**	**Current**	**7/1/07**	**Current**	**7/1/07**	**Current**	**7/1/07**
General One-Component	275	275	2.3	2.3	275	275	2.3	2.3
General Multi-Component	340	340	2.8	2.8	275	275	2.3	2.3
Military Specification	340	340	2.8	2.8	275	275	2.3	2.3
Etching Filler	420	420	3.5	3.5	420	420	3.5	3.5
Solar-Absorbent	420	420	3.5	3.5	360	360	3.0	3.0
Heat-Resistant	420	420	3.5	3.5	360	360	3.0	3.0
Extreme High-Gloss	420	340	3.5	2.8	360	360	3.0	3.0
Metallic	420	420	3.5	3.5	420	420	3.5	3.5
Extreme Performance	420	420	3.5	3.5	360	360	3.0	3.0
Prefabricated Architectural One-Component	420	275	3.5	2.3	275	275	2.3	2.3
Prefabricated Architectural Multi-Component	420	340	3.5	2.8	275	275	2.3	2.3
Touch Up	420	420	3.5	3.5	360	360	3.0	3.0
Repair	420	420	3.5	3.5	360	360	3.0	3.0
Silicone Release	420	420	3.5	3.5	420	420	3.5	3.5
High-Performance Architectural	420	420	3.5	3.5	420	420	3.5	3.5
Camouflage	420	420	3.5	3.5	420	420	3.5	3.5
Vacuum-Metalizing	420	420	3.5	3.5	420	420	3.5	3.5
Mold-Seal	420	420	3.5	3.5	420	420	3.5	3.5
High-Temperature	420	420	3.5	3.5	420	420	3.5	3.5

VOC LIMITS (Continued) Less Water and Less Exempt Compounds Effective Dates								
Coating	**Air-Dried**				**Baked**			
	gm/l		**lb/gal**		**gm/l**		**lb/gal**	
	Current	**7/1/07**	**Current**	**7/1/07**	**Current**	**7/1/07**	**Current**	**7/1/07**
Electric-Insulating Varnish	420	420	3.5	3.5	420	420	3.5	3.5
Pan Backing	420	420	3.5	3.5	420	420	3.5	3.5
Pretreatment Coatings	420	420	3.5	3.5	420	420	3.5	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 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:

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 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 paragraph (c)(1) and/or (c)(2) by using approved air pollution control equipment provided:

(A) the control device reduces VOC emissions from an emission collection system by at least 95 percent by weight or the output of the air pollution control device is no more than 5 PPM VOC by volume calculated as carbon with no dilution; and

(B) the owner/operator demonstrates that the emission collection system collects at least 90 percent by weight of the VOC emissions generated by the sources of VOC 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) Methods of Analysis

All applicable methods of analysis shall be as cited in paragraphs (e)(1) through (e)(6) below, or any other applicable method approved by the Executive Officer, United States Environmental Protection Agency (USEPA), and the California Air Resources Board (CARB).

(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) 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 USEPA, CARB, and the SCAQMD approved test methods used to quantify the amount of each exempt compound.

(2) Determination of the Acid Content of Pretreatment Coatings and Etching Fillers

The acid content of pretreatment coatings and etching fillers shall be measured by ASTM Test Method D1613.

(3) Determination of the Metal Particle Content of Metallic Coatings

The metal particle content of metallic coatings subject to the provisions of this rule shall be determined by the following methods:

(A) SCAQMD Method 318 (Determination of Weight Percent of Elemental Metal in Coatings by X-ray Defraction Method) contained in the SCAQMD "Laboratory Method of Analysis of Enforcement Samples" manual for coatings containing elemental aluminum metal; or

(B) SCAQMD Method 311 (Analysis of Percent Metal in Metallic Coatings by Spectrographic Method) contained in the SCAQMD "Laboratory Method of Analysis of Enforcement Samples" manual for all other non-aluminum particle content analyses.

(4) 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, CARB, 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, 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. USEPA Test Method 18, or ARB Method 422 shall be used to determine emissions of exempt compounds.

(5) 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.

(6) Demonstrations of transfer efficiency shall be conducted in accordance with SCAQMD method "Spray Equipment Transfer Efficiency Test Procedure for Equipment User," May 24, 1989.

(f) Exemptions

(1) The provisions of paragraphs (c)(1) and (c)(2) of this rule shall not apply to:

(A) Stencil coatings;

(B) Safety-indicating coatings;

(C) Magnetic data storage disk coatings;

(D) Solid-film lubricants;

(E) Electric-insulating and thermal-conducting coatings.

(2) The provisions of paragraph (c)(1) of this rule shall not apply to the application of touch-up coatings, repair coatings, and textured finishes. This exemption shall expire for the application of metallic coatings which have a metallic content of 30 grams per liter, mold seal coatings, and to facilities that use less than 3 gallons per day or less than 66 gallons per calendar month of coating, as applied, including an VOC containing

materials added to the original coating as supplied by the manufacturer, effective July 1, 2006.

(3) The provisions of paragraphs (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.

(4) 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.

(5) The provisions of paragraph (c)(2) of this rule shall not apply to aerosol coating products.

(6) The provisions of paragraph (c)(2) of this rule shall not apply to the use of essential public service coatings provided such aggregate use does not exceed 55 gallons in any one calendar year per facility.

(7) The provisions of paragraph (c)(2) of this rule shall not apply to the use of optical anti-reflective coatings provided such aggregate use does not exceed 10 gallons in any one calendar year, per facility.

(8) The provisions of paragraph (c)(2) shall not apply to electrocoatings provided the VOC content of coating concentrates do not exceed 450 grams per liter, less water and less exempt compounds, and the usage of coating concentrates is less than 66 gallons per calendar month, per facility, including any VOC-containing materials added to the concentrate, as supplied by the manufacturer, and any VOC-containing materials added to the bath as make-up solvents.

(9) The provisions of paragraph (c)(2) shall not apply to photoresist operations applying liquid photoresist coating used for photofabrication of metal substrates with a thickness not exceeding 0.060 inches provided the annual usage per facility is 10 gallons or less.

(g) 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.

(h) Alternative Emission Control Plan

An owner/operator may achieve compliance with paragraph (c)(2) by means of an Alternative Emission Control Plan pursuant to Rule 108.

(i) 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.

(j) Recordkeeping

Records of coating and solvent usage shall be maintained pursuant to Rule 109.

(k) 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 grams per liter, less water and less exempt compounds.

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

(Adopted August 3, 1979)(Amended December 4, 1981)

(Amended November 4, 1983)

RULE 1108.1. EMULSIFIED ASPHALT

(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°C (500°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.

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

(Adopted May 4, 1979)(Amended December 4, 1981)

(Amended November 4, 1983)(Amended February 1, 1985)

RULE 1108. CUTBACK ASPHALT

(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°C (500°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.

(Adopted August 3, 1990)(Amended September 7, 1990)(Amended August 12, 1994)
(Amended December 9, 1994)(Amended November 14, 1997)
(Amended June 3, 2005)(Amended February 1, 2008)

RULE 1110.2 EMISSIONS FROM GASEOUS- AND LIQUID-FUELED ENGINES

(a) Purpose

The purpose of Rule 1110.2 is to reduce Oxides of Nitrogen (NO_x), Volatile Organic Compounds (VOCs), and Carbon Monoxide (CO) from engines.

(b) Applicability

All stationary and portable engines over 50 rated brake horsepower (bhp) are subject to this rule.

(c) Definitions

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

(1) AGRICULTURAL STATIONARY ENGINE is a non-portable engine used for 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. An engine used for the processing or distribution of crops or fowl or animals is not an agricultural engine.

(2) APPROVED EMISSION CONTROL PLAN is a control plan, submitted on or before December 31, 1992, and approved by the Executive Officer prior to November 14, 1997, that was required by subdivision (d) of this rule as amended September 7, 1990.

(3) CERTIFIED SPARK-IGNITION ENGINES mean engines certified by California Air Resources Board (CARB) to meet emission standards in accordance with Title 13, Chapter 9, Article 4.5 of the California Code of Regulations (CCR).

(4) EMERGENCY STANDBY ENGINE is an engine which operates as a temporary replacement for primary mechanical or electrical power during periods of fuel or energy shortage or while the primary power supply is under repair.

(5) ENGINE is any spark- or compression-ignited internal combustion engine, including engines used for control of VOCs, but not including engines used for self-propulsion.

(6) EXEMPT COMPOUNDS are defined in District Rule 102 - Definition of Terms.

(7) 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 Section 55.2 of Title 40, Part 55 of the Code of Federal Regulations (40 CFR Part 55). 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.

(8) LEAN-BURN ENGINE means an engine that operates with high levels of excess air and an exhaust oxygen concentration of greater than 4 percent.

(9) LOCATION means any single site at a building, structure, facility, or installation. For the purpose of this definition, a site is a space occupied or to be occupied by an engine. For engines which are brought to a facility to perform maintenance on equipment at its permanent or ordinary location, each maintenance site shall be a separate location.

(10) NET ELECTRICAL ENERGY means the electrical energy produced by a generator, less the electrical energy consumed by any auxiliary equipment necessary to operate the engine generator and, if applicable, any heat recovery equipment, such as heat exchangers.

(11) NON-ROAD ENGINE is any engine, defined under 40 CFR Part 89, that does not remain or will not remain at a location for more than 12 consecutive months, or a shorter period of time where such period is representative of normal annual source operation at a stationary source that resides at a fixed location for more than 12 months (e.g., seasonal operations such as canning facilities), and meets one of the following:

(A) Is used in or on a piece of equipment that is self-propelled or serves a dual purpose by both propelling itself and performing another function (such as a mobile crane); or

(B) Is used in or on a piece of equipment that is intended to be propelled while performing its function (such as lawn mowers and string trimmers); or

(C) By itself, or in or on a piece of equipment, is portable or transportable, meaning designed to be and capable of being carried or moved from one location to another. Transportability includes, but is not limited to, wheels, skids, carrying handles, dolly, trailer, platform or mounting.

(12) OPERATING CYCLE means a period of time within which a round of regularly recurring events is completed, and cannot be stopped without the risk of endangering public safety or health, causing material damage to the equipment or product, or cannot be stopped due to technical constraints. Economic reasons alone will not be sufficient to extend this time period. The operating cycle includes batch processes that may start and finish several times within a twenty-four hour period, in which case each start to finish interval is considered a complete cycle.

(13) OXIDES OF NITROGEN (NOx) means nitric oxide and nitrogen dioxide.

(14) PORTABLE ENGINE is an engine that, by itself or in or on a piece of equipment, is designed to be and capable of being carried or moved from one location to another. Indications of portability include, but are not limited to, wheels, skids, carrying handles, dolly, trailer, platform or mounting. The operator must demonstrate the necessity of the engine being periodically moved from one location to another because of the nature of the operation.

An engine is not portable if:

(A) the engine or its replacement remains or will reside at the same location for more than 12 consecutive months. Any engine, such as a back-up or stand-by engine, that replaces an engine at a location and is intended to perform the same function as the engine being replaced, will be included in calculating the consecutive time period. In that case, the cumulative time of both engines, including the time between the removal of the original engine and installation of the replacement engine, will be counted toward the consecutive time period; or

(B) the engine remains or will reside at a location for less than 12 consecutive months where such a period represents the full length of normal annual source operations such as a seasonal source; or

(C) the engine is removed from one location for a period and then it or its equivalent is returned to the same location thereby circumventing the portable engine residence time requirements.

The period during which the engine is maintained at a designated storage facility shall be excluded from the residency time determination.

(15) RATED BRAKE HORSEPOWER (bhp) is the rating specified by the manufacturer, without regard to any derating, and listed on the engine nameplate.

(16) RICH-BURN ENGINE WITH A THREE-WAY CATALYST means an engine designed to operate near stoichiometric conditions with a catalytic control device that simultaneously reduces emissions of NOx, CO and VOC.

(17) STATIONARY ENGINE is an engine which is either attached to a foundation or if not so attached, does not meet the definition of a portable or non-road engine and is not a motor vehicle as defined in Section 415 of the California Vehicle Code.

(18) TIER 2 AND TIER 3 DIESEL ENGINES mean engines certified by CARB to meet Tier 2 or Tier 3 emission standards in accordance with Title 13, Chapter 9, Article 4 of the CCR.

(19) USEFUL HEAT RECOVERED means the waste heat recovered from the engine exhaust and/or cooling system that is put to productive use. The waste heat recovered may by assumed to be 100% useful unless the hot water, steam or other medium is vented to the atmosphere, or sent directly to a cooling tower or other unproductive use.

(20) VOLATILE ORGANIC COMPOUND (VOC) is as defined in Rule 102.

(d) Requirements

(1) Stationary Engines:

(A) Operators of stationary engines with an amended Rule 1110.1 Emission Control Plan submitted by July 1, 1991, or an Approved Emission Control Plan, designating the permanent removal of engines or the replacement of engines with electric motors, in accordance with subparagraph (d)(1)(B), shall do so by December 31, 1999, or not

operate the engines on or after December 31, 1999 in a manner that exceeds the emission concentration limits listed in Table I:

TABLE I ALTERNATIVE TO ELECTRIFICATION CONCENTRATION LIMITS		
NO_x	VOC	CO
(ppmvd)[1] 11	(ppmvd)[2] 30	(ppmvd)[1] 70

[1] Parts per million by volume, corrected to 15% oxygen on a dry basis and averaged over 15 minutes.

[2] Parts per million by volume, measured as carbon, corrected to 15% oxygen on a dry basis and averaged over the sampling time required by the test method.

(B) The operator of any other stationary engine subject to this rule shall

(i) Remove such engine permanently from service or replace the engine with an electric motor, or

(ii) Not operate the engine in a manner that exceeds the emission concentration limits listed in Table II.

TABLE II CONCENTRATION LIMITS		
NO_x (ppmvd)[1]	VOC (ppmvd)[2]	CO (ppmvd)[1]
bhp = 500: 36 bhp < 500: 45	250	2000
CONCENTRATION LIMITS EFFECTIVE JULY 1, 2010		
NO_x (ppmvd)[1]	VOC (ppmvd)[2]	CO (ppmvd)[1]
bhp = 500: 11 bhp < 500: 45	bhp = 500: 30 bhp < 500: 250	bhp = 500: 250 bhp < 500: 2000

CONCENTRATION LIMITS EFFECTIVE JULY 1, 2011		
NO_x (ppmvd)[1]	VOC (ppmvd)[2]	CO (ppmvd)[1]
11	30	250

[1] Parts per million by volume, corrected to 15% oxygen on a dry basis and averaged over 15 minutes.

[2] Parts per million by volume, measured as carbon, corrected to 15% oxygen on a dry basis and averaged over the sampling time required by the test method.

The concentration limits effective on and after July 1, 2010 shall not apply to engines that operate less than 500 hours per year or use less than 1 x 10^9 British Thermal Units (Btus) per year (higher heating value) of fuel.

If the operator of a two-stroke engine equipped with an oxidation catalyst and insulated exhaust ducts and catalyst housing demonstrates that the CO and VOC limits effective on and after July 1, 2010 are not achievable, then the Executive Officer may, with United States Environmental Protection Agency (EPA) approval, establish technologically achievable, case-by-case CO and VOC limits in place of the concentration limits effective on and after July 1, 2010. The case-by-case limits shall not exceed 250 ppmvd VOC and 2000 ppmvd CO.

If the operator of an engine that uses non-pipeline quality natural gas demonstrates that due to the varying heating value of the gas a longer averaging time is necessary, the Executive Officer may establish for the engine a longer averaging time, not to exceed six hours, for any of the concentration limits of Table II. Non-pipeline quality natural gas is a gas that does not meet the gas specifications of the local gas utility and is not supplied to the local gas utility.

(C) Notwithstanding the provisions in subparagraph (d)(1)(B), the operator of any stationary engine fired by landfill or digestor gas (biogas) shall not operate the engine in a manner that exceeds the emission concentration limits of Table III, provided that the facility monthly average biogas

usage by the biogas engines is 90% or more, based on the higher heating value of the fuels used. The calculation of the monthly facility biogas use percentage may exclude natural gas fired during: any electrical outage at the facility; a Stage 2 or higher electrical emergencies called by the California Independent System Operator Corporation; and when a sewage treatment plant activates an Emergency Operations Center or Incident Command System, as part of an emergency response plan, because of either high influent flows caused by precipitation or a disaster.

The concentration limits effective on and after July 1, 2012 shall become effective provided the Executive Officer conducts a technology assessment that confirms that the limits are achievable, and reports to the Governing Board by July 2010, at a regularly scheduled public meeting.

The concentration limits effective on and after July 1, 2012 shall not apply to engines that operate less than 500 hours per year or use less than 1×10^9 Btus per year (higher heating value) of fuel.

TABLE III CONCENTRATION LIMITS FOR LANDFILL AND DIGESTOR GAS-FIRED ENGINES		
NO_x (ppmvd)[1]	VOC (ppmvd)[2]	CO (ppmvd)[1]
bhp = 500: 36 x ECF[3] bhp < 500: 45 x ECF[3]	Landfill Gas: 40 Digestor Gas: 250 x ECF[3]	2000
CONCENTRATION LIMITS EFFECTIVE JULY 1, 2012		
NO_x (ppmvd)[1]	VOC (ppmvd)[2]	CO (ppmvd)[1]
11	30	250

[1] Parts per million by volume, corrected to 15% oxygen on a dry basis and averaged over 15 minutes.

[2] Parts per million by volume, measured as carbon, corrected to 15% oxygen on a dry basis and averaged over the sampling time required by the test method.

[3] ECF is the efficiency correction factor.

The ECF shall be 1.0 unless:

(i) The engine operator has measured the engine's net specific energy consumption (q_a), in compliance with ASME Performance Test Code PTC 17 -1973, at the average load of the engine; and

(ii) The ECF-corrected emission limit is made a condition of the engine's permit to operate.

The ECF is as follows:

$$ECF = \frac{9250 \text{ Btus/hp-hr}}{\text{Measured } q_a \text{ in Btus/hp-hr}}$$

Measured q_a shall be based on the lower heating value of the fuel. ECF shall not be less than 1.0.

The Executive Officer may approve the burning of more than 10% natural gas in a landfill or digestor gas-fired engine, when it is necessary, if: the only alternative to limiting natural gas to 10% would be shutting down the engine and flaring more landfill or digestor gas; or the engine requires more natural gas in order for a waste heat recovery boiler to provide enough thermal energy to operate a sewage treatment plant, and other boilers at the facility are unable to provide the necessary thermal energy.

Once an engine complies with concentration limits effective on and after July 1, 2012, there shall be no limit on the percentage of natural gas burned.

(D) The operator of any new engine subject to subparagraph (e)(1)(B) shall:

(i) Comply with the requirements of Best Available Control Technology in accordance with Regulation XIII if the engine requires a District permit; or

(ii) Not operate the engine in a manner that exceeds the emission concentration limits in Table I if the engine does not require a District permit.

(E) By February 1, 2009, the operator of a spark-ignited engine without a Rule 218-approved continuous emission monitoring system (CEMS) or a Regulation XX (RECLAIM)-approved CEMS shall equip and maintain the engine with an air-to-fuel ratio controller with an oxygen sensor and feedback control, or other equivalent technology approved by the Executive Officer, CARB and EPA.

(F) New Non-Emergency Electrical Generators

(i) All new non-emergency engines driving electrical-generators shall comply with the following emission standards:

TABLE IV EMISSION STANDARDS FOR NEW ELECTRICAL GENERATION ENGINES	
Pollutant	**Emission Standard (lbs/MW-hr)[1]**
NOx	0.070
CO	0.20
VOC	0. 10[2]

1. The averaging time of the emission standards is 15 minutes for NOx and CO and the sampling time required by the test method for VOC, except as described in the following clause.
2. Mass emissions of VOC shall be calculated using a ratio of 16.04 pounds of VOC per lb-mole of carbon.

(ii) Engines subject to this subparagraph that produce combined heat and electrical power may include one megawatt-hour (MW-hr) for each 3.4 million Btus of useful heat recovered (MW_{th}-hr), in addition to each MW-hr of net electricity produced (MW_e-hr). The compliance of such engines shall be based on the following equation:

$$\frac{\text{Lbs}}{\text{MW-hr}} = \frac{\text{Lbs}}{\text{MW}_e\text{-hr}} \times \text{Electrical Energy Factor (EEF)}$$

Where:

Lbs/MW-hr = The calculated emissions that shall comply with the emission standards in Table IV

Lbs/MW_e-hr = The short-term engine emission limit in pounds per MW_e-hr of net electrical energy produced, averaged over 15 minutes. The engine shall comply with this limit at all times.

EEF = The annual MW_e-hrs of net electrical energy produced divided by the sum of

annual MW_e-hrs plus annual MW_{th}-hrs of useful heat recovered. The engine operator shall demonstrate annually that the EEF is less than the value required for compliance.

(iii) For combined heat and power engines, the short-term emission limits in lbs/MW_e-hr and the maximum allowed annual EEF must be selected by operator and stated on the operating permit.

(iv) Notwithstanding Rule 2001, the requirements of this subparagraph shall apply to NOx emissions from new non-emergency engines driving electrical-generators subject to Regulation XX (RECLAIM).

(v) This subparagraph does not apply to: engines installed prior to February 1, 2008; engines issued a permit to construct prior to February 1, 2008 and installed within 12 months of the date of the permit to construct; engines for which an application is deemed complete by October 1, 2007; engines installed by an electric utility on Santa Catalina Island; engines installed at remote locations without access to natural gas and electric power; engines used to supply electrical power to ocean-going vessels while at berth, prior to January 1, 2014; or landfill or digestor gas-fired engines that meet the requirements of subparagraph (d)(1)(C).

(2) Portable Engines:

(A) The operator of any portable engine generator subject to this rule shall not use the portable generator for:

(i) Power production into the electric grid, except to maintain grid stability during an emergency event or other unforeseen event that affects grid stability; or

(ii) Primary or supplemental power to a building, facility, stationary source, or stationary equipment, except during unforeseen interruptions of electrical power from the serving utility, maintenance and repair operations, and remote operations where grid power is unavailable. For interruptions of electrical

power, the operation of a portable generator shall not exceed the time of the actual interruption of power.

This subparagraph shall not apply to a portable generator that complies with emission concentration limits of Table I and the other requirements in this rule applicable to stationary engines.

(B) The operator of any portable diesel engine shall comply with the applicable requirements of the Subchapter 7.5 Airborne Toxic Control Measures for diesel particulate matter in Chapter 1, Division 3, Title 17 of the California Code of Regulations.

(C) The operator of any portable spark-ignited engine shall comply with the applicable requirements of the Large Spark Ignition Engine Fleet Requirements, Article 2, Chapter 15, Division 3, Title 13 of the California Code of Regulations.

(e) Compliance

(1) Agricultural Stationary Engines:

(A) The operator of any agricultural stationary engine subject to this rule and installed or issued a permit to construct prior to June 3, 2005 shall comply with paragraph (d)(1)(B) and the other applicable provisions of this rule in accordance with the compliance schedules in Table V:

TABLE V
COMPLIANCE SCHEDULES FOR STATIONARY AGRICULTURAL ENGINES

Action Required	**Tier 2 and Tier 3 Diesel Engines, Certified Spark-Ignition Engines, and All Engines at Facilities with Actual Emissions Less Than the Amounts in the Table of Rule 219(q)**	**Other Engines**
Submit notification of applicability to the Executive Officer	January 1, 2006	January 1, 2006
Submit to the Executive Officer applications for permits to construct engine modifications, control equipment, or replacement engines	March 1, 2009	September 1, 2007

Initiate construction of engine modifications, control equipment, or replacement engines	September 30, 2009, or 30 days after the permit to construct is issued, whichever is later	March 30, 2008, or 30 days after the permit to construct is issued, whichever is later
Complete construction and comply with applicable requirements	January 1, 2010, or 60 days after the permit to construct is issued, whichever is later	July 1, 2008, or 60 days after the permit to construct is issued, whichever is later
Complete initial source testing	March 1, 2010, or 120 days after the permit to construct is issued, whichever is later	September 1, 2008, or 120 days after the permit to construct is issued, whichever is later

The notification of applicability shall include the following for each engine:

(i) Name and mailing address of the operator

(ii) Address of the engine location

(iii) Manufacturer, model, serial number, and date of manufacture of the engine

(iv) Application number

(v) Engine type (diesel, rich-burn spark-ignition or lean-burn spark-ignition)

(vi) Engine fuel type

(vii) Engine use (pump, compressor, generator, or other)

(viii) Expected means of compliance (engine replacement, control equipment installation, or electrification)

(B) The operator of any new agricultural stationary engine that is not subject to the compliance schedule of subparagraph (e)(1)(A) for existing engines shall comply with the requirements of subparagraph (d)(1)(D) immediately upon installation.

(2) Non-Agricultural Stationary Engines:

(A) The operator of any stationary engine not meeting the requirements of subparagraphs (d)(1)(B) or (d)(1)(C) that go into effect in 2010 or later, shall comply with the compliance schedule in Table VI:

TABLE VI COMPLIANCE SCHEDULE FOR NON -AGRICULTURAL STATIONARY ENGINES	
Action Required	**Applicable Compliance Date**
Submit to the Executive Officer applications for permits to construct engine modifications, control equipment, or replacement engines	Twelve months before the final compliance date
Initiate construction of engine modifications, control equipment, or replacement engines	Three months before the final compliance date, or 60 days after the permit to construct is issued, whichever is later
Complete construction and comply with applicable requirements	The final compliance date, or 120 days after the permit to construct is issued, whichever is later
Complete initial source testing	60 days after the final compliance date in (d)(1)(B) or (d)(1)(C), or 180 days after the permit to construct is issued, whichever is later

(B) The operator of any stationary engine that elects to amend a permit to operate to incorporate ECF-adjusted emission limits shall submit to the Executive Officer an application for a change of permit conditions by August 1, 2008, and comply with emission limits of the previous version of this rule until February 1, 2009 when the engine shall be in compliance with the emission limits of this rule.

(C) The operator of any stationary engine that is required to add operating restrictions to a permit to operate to meet the requirements of this rule

shall submit to the Executive Officer an application for a change of permit conditions by August 1, 2008.

(3) Stationary Engine CEMS

(A) The operator of any stationary engine with an existing CEMS shall commence the reporting required by Rule 218 Subdivision (f) on January 1, 2008. The first summary report for the six months ending June 30, 2008 shall be due on July 30, 2008.

(B) The operator of any stationary engine that is required to modify an existing CEMS or install a CEMS on an existing engine shall comply with the compliance schedule in Table VII. Public agencies shall be allowed one year more than the dates in Table VII, except for biogas engines.

TABLE VII
COMPLIANCE SCHEDULE FOR NEW OR MODIFIED CEMS ON EXISTING ENGINES

	Applicable Compliance Dates For:		
Action Required	**Non-Biogas Engines Rated at 750 bhp or More**	**Non-Biogas Engines Rated at Less than 750 bhp**	**Biogas Engines***
Submit to the Executive Officer applications for new or modified CEMS	August 1, 2008	August 1, 2009	January 1, 2011
Complete installation and commence CEMS operation, calibration, and reporting requirements	Within 180 days of initial approval	Within 180 days of initial approval	Within 180 days of initial approval
Complete certification tests	Within 90 days of installation	Within 90 days of installation	Within 90 days of installation
Submit certification reports to Executive Officer	Within 45 days after tests are completed	Within 45 days after tests are completed	Within 45 days after tests are completed
Obtain final approval of CEMS	Within 1 year of initial approval	Within 1 year of initial approval	Within 1 year of initial approval

* A biogas engine is one that is subject to the emission limits of Table III.

(4) Stationary Engine Inspection and Monitoring (I&M) Plans:

The operator of stationary engines subject to the I&M plan provisions of subparagraph (f)(1)(D) shall:

(A) By August 1, 2008, submit an initial I&M plan application to the Executive Officer for approval;

(B) By December 1, 2008, implement an approved I&M plan or the I&M plan as submitted if the plan is not yet approved.

Any operator of 15 or more stationary engines subject to the I&M plan provisions shall comply with the above schedule for at least 50% of engines, and for the remaining engines shall:

(C) By February 1, 2009, submit an initial I&M plan application to the Executive Officer for approval;

(D) By June 1, 2009, implement an approved I&M plan or the I&M plan as submitted if the plan is not yet approved.

(5) Stationary Engine Air-to-Fuel Ratio Controllers

(A) The operator of any stationary engine that does not have an air-to-fuel ratio controller, as required by subparagraph (d)(1)(E), shall comply with those requirements in accordance with the compliance schedule in Table VI, except that the application due date is no later than May 1, 2008 and the initial source testing may be conducted at the time of the testing required by subparagraph (f)(1)(C).

(B) The operator of any stationary engine that has the air-to-fuel ratio controller required by subparagraph (d)(1)(E), but it is not listed on the permit to operate, shall submit to the Executive Officer an application to amend the permit by April 1, 2008.

(C) The operator of more than five engines that do not have air-to-fuel ratio controllers may take an additional three months, to May 1, 2009, to install the equipment on up to 50% of the affected engines.

(6) New Stationary Engines

The operator of any new stationary engine issued a permit to construct after February 1, 2008 shall comply with the applicable I&M or CEMS requirements of this rule when operation commences. If applicable, the operator shall provide the required information in subparagraph (f)(1)(D) to the Executive Officer prior to the issuance of the permit to construct so that the I&M procedures can be included in the permit. A separate I&M plan application is not required.

(7) Biogas Engines

For any biogas engine for which the operator applies to the Executive Officer by April 1, 2008 for a change of permit conditions for ECF-corrected emission limits, or the approval to burn more than 10 percent natural gas in accordance with subparagraph (d)(1)(C), the biogas engine shall not be subject to the initial concentration limits of Tables II or III until August 1, 2008, provided the operator continues to comply with all emission limits in effect prior to February 1, 2008.

(8) Compliance Schedule Exception

If an engine operator submits to the Executive Officer an application for an administrative change of permit conditions to add a permit condition that causes the engine permit to expire by the effective date of any requirement of this rule, then the operator is not required to comply with the earlier steps required by this subdivision for that requirement. The effective date for the CEMS requirements shall be one year after the date that a CEMS application is due.

(9) Exceedance of Usage Limits

(A) If an engine was initially exempt from the new concentration limits in subparagraph (d)(1)(B) or subparagraph (d)(1)(C) that take effect on or after July 1, 2010 because of low engine use but later exceeds the low-use criteria, the operator shall bring the engine into compliance with the rule in accordance with the schedule in Table VI with the final compliance date in Table VI being twelve months after the conclusion of the first twelve-month period for which the engine exceeds the low-use criteria.

(B) If engines that were initially exempt from new CEMS by the low-use criterion in subclause (f)(1)(A)(ii)(I) later exceed that criterion, the operator shall install CEMS on those engines in accordance with the schedule in Table VII, except that the date for submitting the CEMS application in Table VII shall be six months after the conclusion of the first twelve-month period for which the engines exceed the criterion.

(f) Monitoring, Testing, Recordkeeping and Reporting

(1) Stationary engines:

The operator of any engine subject to the provisions of paragraph (d)(1) of this rule shall meet the following requirements:

(A) Continuous Emission Monitoring

(i) For engines of 1000 bhp and greater and operating more than two million bhp-hr per calendar year, a NO_x and CO continuous emission monitoring system (CEMS) shall be installed, operated and maintained in calibration to demonstrate compliance with the emission limits of this rule.

(ii) (I) For facilities with engines subject to paragraph (d)(1), having a combined rating of 1500 bhp or greater at the same location, and having a combined fuel usage of more than 16×10^9 Btus per year (higher heating value), CEMS shall be installed, operated and maintained in calibration to demonstrate compliance of those engines with the applicable NO_x and CO emission limits of this rule.

(II) Any engine that as of October 1, 2007 is located within 75 feet of another engine (measured from engine block to engine block) is considered to be at the same location. Operators of new engines shall not install engines farther than 75 feet from another engine unless the operator demonstrates to the Executive Officer that operational needs or space limitations require it.

(III) The following engines shall not be counted toward the combined rating or required to have a CEMS by this clause: engines rated at less than 500 bhp; standby engines that are limited by permit conditions to only operate when other primary engines are not operable; engines that are limited by permit conditions to operate less than 1000 hours per year or a fuel usage of less than 8×10^9 Btus per year (higher heating value of all fuels used); engines that are used primarily to fuel public natural gas transit vehicles and that are required by a

permit condition to be irreversibly removed from service by December 31, 2014; and engines required to have a CEMS by the previous clause. A CEMS shall not be required if permit conditions limit the simultaneous use of the engines at the same location in a manner to limit the combined rating of all engines in simultaneous operation to less than 1500 bhp.

(IV) For engines rated below 1000 bhp, the CEMS may be time shared by multiple engines.

(V) Operation of engines by the electric utility in the Big Bear Lake area during the failure of a transmission line to the utility may be excluded from an hours-per-year or fuel usage limit that is elected by the operator pursuant to subclause (f)(1)(A)(ii)(III).

(VI) In lieu of complying with subclause (f)(1)(A)(ii)(I), an operator that is a public agency, or is contracted to operate engines solely for a public agency, may comply with the Inspection and Monitoring Plan requirements of subparagraph (f)(1)(D), except that the operator shall conduct emission checks at least weekly or every 150 operating hours, whichever occurs later. If any such engine is found to exceed an applicable NOx or CO limit by a source test required by subparagraph (f)(1)(C) or District test using a portable analyzer on three or more occasions in any 12-month period, the operator shall comply with the CEMS requirements of this subparagraph for such engine in accordance with the compliance schedule of Table VII, except that the operator shall submit a CEMS application to the Executive Officer within six months of the third exceedance.

(iii) All CEMS required by this rule shall:

(I) Comply with the applicable requirements of Rule 218, including equipment specifications and certification, operating, recordkeeping, quality assurance and

reporting requirements, except as otherwise authorized by this rule;

(II) Include equipment that measures and records exhaust gas concentrations, both uncorrected and corrected to 15 percent oxygen on a dry basis; and

(III) Have data gathering and retrieval capability approved by the Executive Officer

(iv) The operator of an engine that is required to install CEMS may request the Executive Officer to approve an alternative monitoring device (or system components) to demonstrate compliance with the emission limits of this rule. The applicant shall demonstrate to the Executive Officer that the proposed alternative monitoring device is at a minimum equivalent in relative accuracy, precision, reliability, and timeliness to a CEMS for that engine, according to the criteria specified in 40 CFR Part 75 Subpart E. In lieu of the criteria specified in 40 CFR Part 75 Subpart E, substitute criteria is acceptable if the applicant demonstrates to the Executive Officer that the proposed alternative monitoring device is at minimum equivalent in relative accuracy, precision, reliability, and timeliness to a CEMS for that engine. Upon approval by the Executive Officer, the substitute criteria shall be submitted to EPA as an amendment to the State Implementation Plan (SIP).

If the alternative monitoring device is denied or fails to be recertified, a CEMS shall be required.

(v) Notwithstanding the requirements of Rules 218 and 218.1, operators of engines that are required to install a CEMS by clause (ii) of this subparagraph may:

(I) Store data electronically without a strip chart recorder, but there shall be redundant data storage capability for at least 15 days of data. The operator must demonstrate that both sets of data are equivalent.

(II) Conduct relative accuracy testing on the same schedule for source testing in clause (f)(1)(C)(i), instead of

annually. The minimum sampling time for each test is 15 minutes.

(vi) Notwithstanding the requirements of Rules 218 and 218.1, operators of engines that are required to install a CEMS by clause (ii) of this subparagraph, and that are to be monitored by a timeshared CEMS, may:

(I) Monitor an engine with the CEMS for 15 consecutive minutes, purge for the minimum required purge time, then monitor the next engine for 15 consecutive minutes. The CEMS shall operate continuously in this manner, except for required calibrations.

(II) Record the corrected and uncorrected NOx, CO and diluent data at least once per minute and calculate and record the 15-minute average corrected concentrations for each sampling period.

(III) Have sample lines to each engine that are not the same length. The purge time will be based on the sample line with the longest response time. Response times shall be checked during cylinder gas audits. Sample lines shall not exceed 100 feet in length.

(IV) Conduct a minimum of five tests for each engine during relative accuracy tests.

(V) Perform a cylinder gas audit every calendar quarter on each engine, except for engines for which relative accuracy testing was conducted that quarter.

(VI) Exclude monitoring of nitrogen dioxide (NO_2) for rich-burn engines, unless source testing demonstrates that NO_2 is more than 10 percent of total NOx.

(VII) Conduct daily calibration error (CE) tests by injecting calibration gases at the analyzers, except that at least once per week the CE test shall be conducted by injecting calibration gases as close to the probe tip as practical.

(VIII) Stop operating and calibrating the CEMs during any period that the operator has a continuous record that the engine was not in operation.

(vii) A CO CEMS shall not be required for lean-burn engines or an engine that is subject to Regulation XX (RECLAIM), and not required to have a NOx CEMS by that regulation.

(viii) Notwithstanding the requirements of this paragraph and paragraph (c)(2) of Rule 2012, an operator may take an existing NOx CEMS out of service for up to two weeks (cumulative) in order to modify the CEMS to add CO monitoring.

(B) Elapsed Time Meter

Maintain an operational non-resettable totalizing time meter to determine the engine elapsed operating time.

(C) Source Testing

(i) Effective August 1, 2008, conduct source testing for NO_x, VOC reported as carbon, and CO concentrations (concentrations in ppm by volume, corrected to 15 percent oxygen on dry basis) at least once every two years, or every 8,760 operating hours, whichever occurs first. Relative accuracy tests required by Rule 218.1 or 40 CFR Part 75 Subpart E will satisfy this requirement for those pollutants monitored by a CEMS. The source test frequency may be reduced to once every three years if the engine has operated less than 2,000 hours since the last source test. If the engine has not been operated within three months of the date a source test is required, the source test shall be conducted when the engine resumes operation for a period longer than either seven consecutive days or 15 cumulative days of operation. The operator of the engine shall keep sufficient operating records to demonstrate that it meets the requirements for extension of the source testing deadlines.

(ii) Conduct source testing for at least 30 minutes during normal operation (actual duty cycle). This test shall not be conducted under a steady-state condition unless it is the normal operation. In addition, conduct source testing for NOx and CO emissions for at least 15 minutes at: an engine's actual peak load, or the maximum load that can be practically achieved during the test, and; at actual minimum load, excluding idle, or the minimum

load that can be practically achieved during the test. These additional two tests are not required if the permit limits the engine to operating at one defined load, ± 10%. No pre-tests for compliance are permitted. The emission test shall be conducted at least 40 operating hours, or at least 1 week, after any engine servicing or tuning. If an emission exceedance is found during any of the three phases of the test, that phase shall be completed and reported. The operator shall correct the exceedance, and the source test may be immediately resumed.

(iii) Use a contractor to conduct the source testing that is approved by the Executive Officer under the Laboratory Approval Program for the necessary test methods.

(iv) Submit a source test protocol to the Executive Officer for written approval at least 60 days before the scheduled date of the test. The source test protocol shall include the name, address and phone number of the engine operator and a District-approved source testing contractor that will conduct the test, the application and permit number(s), emission limits, a description of the engine(s) to be tested, the test methods and procedures to be used, the number of tests to be conducted and under what loads, the required minimum sampling time for the VOC test, based on the analytical detection limit and expected VOC levels, and a description of the parameters to be measured in accordance with the I&M plan required by subparagraph (f)(1)(D). The source test protocol shall be approved by the Executive Officer prior to any testing. The operator is not required to submit a protocol for approval if: there is a previously approved protocol that meets these requirements; the engine has not been altered in a manner that requires a permit alteration; and emission limits have not changed since the previous test. If the operator submits the protocol by the required date, and the Executive Officer takes longer than 60 days to approve the protocol, the operator shall be allowed the additional time needed to conduct the test.

(v) Provide the Executive Officer at least 30 days prior notice of any source test to afford the Executive Officer the opportunity

to have an observer present. If after 30 days notice for an initially scheduled performance test, there is a delay (due to operational problems, etc.) in conducting the scheduled performance test, the engine operator shall notify the Executive Officer as soon as possible of any delay in the original test date, either by providing at least seven days prior notice of the rescheduled date of the performance test, or by arranging a rescheduled date with the Executive Officer by mutual agreement.

(vi) Submit all source test reports, including a description of the equipment tested, to the Executive Officer within 60 days of completion of the test.

(vii) By February 1, 2009, provide, or cause to be provided, source testing facilities as follows:

(I) Sampling ports adequate for the applicable test methods. This includes constructing the air pollution control system and stack or duct such that pollutant concentrations can be accurately determined by applicable test methods;

(II) Safe sampling platform(s), scaffolding or mechanical lifts, including safe access, that comply with California General Safety Orders. Agricultural stationary engines are excused from this subclause if they are in remote locations without electrical power;

(III) Utilities for sampling and testing equipment. Agricultural stationary engines are exempt from this subclause if they are on wheels and moved to storage during the off season.

(D) Inspection and Monitoring (I&M) Plan

Submit to the Executive Officer for written approval and implement an I&M plan. One plan application is required for each facility. The I&M plan shall include:

(i) Identification of engine and control equipment operating parameters necessary to maintain pollutant concentrations within the rule and permit limits. This shall include, but not be limited to:

(I) Procedures for using a portable NOx, CO and oxygen analyzer to establish the set points of the air-to-fuel ratio controller (AFRC) at 25%, 60% and 95% load (or fuel flow rate), ± 5%, or the minimum, midpoint and maximum loads that actually occur during normal operation, ± 5%, or at any one load within the ± 10% range that an engine permit is limited to in accordance with clause (f)(1)(C)(ii);

(II) Procedures for verifying that the AFRC is controlling the engine to the set point during the daily monitoring required by clause (f)(1)(D)(iv);

(III) Procedures for reestablishing all AFRC set points with a portable NOx, CO and oxygen analyzer whenever a set point must be readjusted, within 24 hours of an oxygen sensor replacement, and, for rich-burn engines with three way catalysts, between 100 and 150 engine operating hours after an oxygen sensor replacement;

(IV) For engines with catalysts, the maximum allowed exhaust temperature at the catalyst inlet, based on catalyst manufacturer specifications;

(V) For lean-burn engines with selective catalytic control devices, the minimum exhaust temperature at the catalyst inlet required for reactant flow (ammonia or urea), and procedures for using a portable NOx and oxygen analyzer to establish the acceptable range of reactant flow rate, as a function of load.

Parameter monitoring is not required for diesel engines without exhaust gas recirculation and catalytic exhaust control devices.

(ii) Procedures for alerting the operator to emission control malfunctions. Engine control systems, such as air-to-fuel ratio controllers, shall have a malfunction indicator light and audible alarm.

(iii) Procedures for at least weekly or every 150 engine operating hours, whichever occurs later, emissions checks by a portable NOx, CO and oxygen analyzer.

(I) If an engine is in compliance for three consecutive emission checks, without any adjustments to the oxygen sensor set points, then the engine may be checked monthly or every 750 engine operating hours, whichever occurs later, until there is a noncompliant emission check or, for rich-burn engines with three-way catalysts, the oxygen sensor is replaced.

(II) For diesel engines and other lean-burn engines that are subject to Regulation XX or have a NOx CEMs, and that are subject to a CO limit more stringent than the 2000 ppmvd limit of Tables II or III, a CO emission check shall be performed at least quarterly, or every 2,000 engine operating hours, whichever occurs later.

(III) For diesel engines and other lean-burn engines that are subject to Regulation XX or have a NOx CEMs, and that are not subject to a CO limit more stringent than the 2000 ppmvd limit of Tables II or III, emission checks are not required.

(IV) No engine or control system maintenance or tuning may be conducted within 72 hours prior to the emission check, unless it is an unscheduled, required repair.

(V) The portable analyzer shall be calibrated, maintained and operated in accordance with the manufacturer's specifications and recommendations and the Protocol for the Periodic Monitoring of Nitrogen Oxides, Carbon Monoxide, and Oxygen from Stationary Engines Subject to South Coast Air Quality Management District Rule 1110.2, approved on February 1, 2008, or subsequent protocol approved by EPA and the Executive Officer.

(iv) Procedures for at least daily monitoring, inspection and recordkeeping of:

(I) engine load or fuel flow rate;

(II) the set points, maximums and acceptable ranges of the parameters identified by clause (f)(1)(D)(i), and the actual values of the same parameters;

(III) the engine elapsed time meter operating hours;

(IV) the operating hours since the last emission check required by (f)(1)(D)(iii);

(V) for rich-burn engines with three-way catalysts, the difference of the exhaust temperatures (?T) at the inlet and outlet of the catalyst (changes in the ?T can indicate changes in the effectiveness of the catalyst);

(VI) engine control system and AFRC system faults or alarms that affect emissions.

The daily monitoring and recordkeeping may be done in person by the operator, or by remote monitoring.

(v) Procedures for responding to, diagnosing and correcting breakdowns, faults, malfunctions, alarms, emission checks finding emissions in excess of rule or permit limits, and parameters out-of-range.

(I) For a breakdown resulting in a violation of this rule or a permit condition, or for an emission check that finds emissions in excess of those allowed by this rule or a permit condition, the operator shall correct the problem and demonstrate compliance with another emission check, or shut down an engine by the end of an operating cycle, or within 24 hours from the time the operator knew of the breakdown or excess emissions, or reasonably should have known, whichever is sooner.

(II) For other problems, such as parameters out-of-range, an operator shall correct the problem and demonstrate compliance with another emission check within 48 hours of the operator first knowing of the problem.

(III) An operator shall not be considered in violation of the emission limits of this rule or in permit conditions if the operator complies with this subparagraph and the reporting requirements of subparagraph (f)(1)(H). Any emission check conducted by District staff that finds excess emissions is a violation.

(vi) Procedures and schedules for preventive and corrective maintenance.

(vii) Procedures for reporting noncompliance to the Executive Officer in accordance with subparagraph (f)(1)(H).

(viii) Procedures and format for the recordkeeping of monitoring and other actions required by the plan.

(ix) Procedures for plan revisions. Before any change in I&M plan operations can be implemented, the revised I&M plan shall be submitted to and approved by the Executive Officer. The operator shall apply for a plan revision prior to any change in emission limits or control equipment.

(x) An engine is not subject to this subparagraph if it is required by this rule to have a NOx and CO CEMS, or voluntarily has a NOx and CO CEMS that complies with this rule.

(E) Operating Log

Maintain a monthly engine operating log that includes:

(i) Total hours of operation;

(ii) Type of liquid and/or type of gaseous fuel;

(iii) Fuel consumption (cubic feet of gas and gallons of liquid); and

(iv) Cumulative hours of operation since the last source test required in subparagraph (f)(1)(C).

Facilities subject to Regulation XX may maintain a quarterly log for engines that are designated as a process unit on the facility permit.

(F) New Non-Emergency Electrical Generating Engines

Operators of engines subject to the requirements of subparagraph (d)(1)(F) shall also meet the following requirements.

(i) The engine generator shall be monitored with a calibrated electric meter that measures the net electrical output of the engine generator system, which is the difference between the electrical output of the generator and the electricity consumed by the auxiliary equipment necessary to operate the engine generator.

(ii) For engines monitored with a CEMS, the emissions of the monitored pollutants in ppmvd corrected to 15% O2, lbs/hr, and lbs/MW_e-hr and the net MW_e-hrs produced shall be calculated and recorded for the four 15-minute periods of each hour of operation. The mass emissions of NOx shall be calculated based on the measured fuel flow and one of the F

factor methods of 40 CFR 60, Appendix A, Method 19, or other method approved by the Executive Officer. Mass emissions of CO shall be calculated in the same manner as NOx, except that the ppmvd CO shall be converted to lb/scf using a conversion factor of 0.727 x 10^{-7}.

(iii) For NOx and CO emissions from engines not monitored with a CEMS and VOC emissions from all engines, the emissions of NOx, CO and VOC in lbs/MW_e-hr shall be calculated and recorded whenever the pollutant is measured by a source test or emission check. Mass emissions of NOx and CO shall be calculated in the same manner as the previous clause. Mass emissions of VOC shall be calculated in the same manner, except that the ppmvd VOC as carbon shall be converted to lb/scf using a conversion factor of 0.415 x 10^{-7}.

(iv) For engines generating combined heat and power that rely on the EEF to comply with Table IV emission standards, the daily and annual useful heat recovered (MW_{th}-hrs), net electrical energy generated (MW_e-hrs) and EEF shall be monitored and recorded.

(v) Other methods of calculating mass emissions than those specified, such as by direct measurement of exhaust volume, may be used if approved by the Executive Officer. All monitoring, calculation, and recordkeeping procedures must be approved by the Executive Officer.

(vi) Operators of combined heat and power engines shall submit to the Executive Officer the reports of the following information within 15 days of the end of the first year of operation, and thereafter within 15 days of the end of each calendar year: the annual net electrical energy generated (MW_e-hrs); the annual useful heat recovered (MW_{th}-hrs), the annual EEF calculated in accordance with clause (d)(1)(F)(ii); and the maximum annual EEF allowed by the operating permit. If the actual annual EEF exceeds the allowed EEF, the report shall also include the time periods and emissions for all instances where emissions exceeded any emission standard in Table IV.

(G) Portable Analyzer Operator Training

The portable analyzer tests required by the I&M Plan requirements of subparagraph (f)(1)(D) shall only be conducted by a person who has completed an appropriate District-approved training program in the operation of portable analyzers and has received a certification issued by the District.

(H) Reporting Requirements

(i) The operator shall report to the Executive Officer, by telephone (1-800-CUT-SMOG or 1-800-288-7664) or other District-approved method, any breakdown resulting in emissions in excess of rule or permit emission limits within one hour of such noncompliance or within one hour of the time the operator knew or reasonably should have known of its occurrence. Such report shall identify the time, specific location, equipment involved, responsible party to contact for further information, and to the extent known, the causes of the noncompliance, and the estimated time for repairs. In the case of emergencies that prevent a person from reporting all required information within the one-hour limit, the Executive Officer may extend the time for the reporting of required information provided the operator has notified the Executive Officer of the noncompliance within the one-hour limit.

(ii) Within seven calendar days after the reported breakdown has been corrected, but no later than thirty calendar days from the initial date of the breakdown, unless an extension has been approved in writing by the Executive Officer, the operator shall submit a written breakdown report to the Executive Officer which includes:

(I) An identification of the equipment involved in causing, or suspected of having caused, or having been affected by the breakdown;

(II) The duration of the breakdown;

(III) The date of correction and information demonstrating that compliance is achieved;

(IV) An identification of the types of excess emissions, if any, resulting from the breakdown;

(V) A quantification of the excess emissions, if any, resulting from the breakdown and the basis used to quantify the emissions;

(VI) Information substantiating whether the breakdown resulted from operator error, neglect or improper operation or maintenance procedures;

(VII) Information substantiating that steps were immediately taken to correct the condition causing the breakdown, and to minimize the emissions, if any, resulting from the breakdown;

(VIII) A description of the corrective measures undertaken and/or to be undertaken to avoid such a breakdown in the future; and

(IX) Pictures of any equipment which failed, if available.

(iii) Within 15 days of the end of each calendar quarter, the operator shall submit to the Executive Officer a report that lists each occurrence of a breakdown, fault, malfunction, alarm, engine or control system operating parameter out of the acceptable range established by an I&M plan or permit condition, or an emission check that finds excess emissions. Such report shall be in a District-approved format, and for each incident shall identify the time of the incident, the time the operator learned of the incident, specific location, equipment involved, responsible party to contact for further information, to the extent known the causes of the event, the time and description of corrective actions, including shutting an engine down, and the results of all portable analyzer NOx and CO emissions checks done before or after the corrective actions. The operator shall also report if no incidents occurred.

(2) Portable engines:

The operator of any portable engine shall maintain a monthly engine operating log that includes:

(i) Total hours of operation; or

(ii) Type of liquid and/or type of gaseous fuel; and

(iii) Fuel consumption (cubic feet of gas and gallons of liquid).

Facilities subject to Regulation XX may maintain a quarterly log for engines that are designated as a process unit on the facility permit.

(3) Recordkeeping for All Engines

All data, logs, test reports and other information required by this rule shall be maintained for at least five years and made available for inspection by the Executive Officer.

(g) Test Methods

Testing to verify compliance with the applicable requirements shall be conducted in accordance with the test methods specified in Table VIII, or any test methods approved by CARB and EPA, and authorized by the Executive Officer.

TABLE VIII

TESTING METHODS

Pollutant	Method
NO_x	District Method 100.1
CO	District Method 100.1
VOC	District Method 25.1* or District Method 25.3*

* Excluding ethane and methane

A violation of any standard of this rule established by any of the specified test methods, or any test methods approved by the CARB or EPA, and authorized by the Executive Officer, shall constitute a violation of this rule.

(h) Exemptions

The provisions of subdivision (d) shall not apply to:

(1) All orchard wind machines powered by an internal combustion engine.

(2) Emergency standby engines, engines used for fire-fighting and flood control, and any other emergency engines approved by the Executive Officer, which have permit conditions that limit operation to 200 hours or less per year as determined by an elapsed operating time meter, and agricultural emergency standby engines that are exempt from a District permit and operate 200 hours or less per year as determined by an elapsed operating time meter.

(3) Laboratory engines used in research and testing purposes.

(4) Engines operated for purposes of performance verification and testing of engines.

(5) Auxiliary engines used to power other engines or gas turbines during start-ups.

(6) Portable engines that are registered under the state registration program pursuant to Title 13, Article 5 of the CCR.

(7) Nonroad engines, with the exception that subparagraph (d)(2)(A) shall apply to portable generators.

(8) Engines operating on San Clemente Island.

(9) Agricultural stationary engines provided that:

(A) The operator submits documentation to the Executive Officer by the applicable date in Table V when permit applications are due that the applicable electric utility has rejected an application for an electrical line extension to the location of the engines, or the Executive Officer determines that the operator does not qualify, due to no fault of the operator, for funding authorized by California Health and Safety Code Section 44229; and

(B) The operator replaces the engines, in accordance with the compliance schedule of Table IX, with engines certified by CARB to meet the Tier 4 emission standards of 40 CFR Part 1039 Section 1039.101, Table 1. These Tier 4 replacement engines shall be considered to comply with Best Available Control Technology; and

(C) The operator does not operate the Tier 4 engines in a manner that exceeds the not-to-exceed standards of 40 CFR Section 1039.101, Paragraph (e), as determined by the test methods of subdivision (g) of this rule.

TABLE IX
COMPLIANCE SCHEDULE FOR INSTALLATION OF NEW TIER 4 STATIONARY AGRICULTURAL ENGINES

Action Required	Due Date
Submit to the Executive Officer applications for permits to construct engine modifications, control equipment, or replacement engines	March 1, 2013

Initiate construction of engine modifications, control equipment, or replacement engines	September 30, 2013, or 30 days after the permit to construct is issued, whichever is later
Complete construction and comply with applicable requirements	January 1, 2014, or 60 days after the permit to construct is issued, whichever is later
Complete initial source testing	March 1, 2014, or 120 days after the permit to construct is issued, whichever is later

(10) An engine start-up, until sufficient operating temperatures are reached for proper operation of the emission control equipment. The start-up period shall not exceed 30 minutes, unless the Executive Officer approves a longer period for an engine and makes it a condition of the engine permit.

(11) An engine start-up, after an engine overhaul or major repair requiring removal of a cylinder head, for a period not to exceed four operating hours.

(12) The initial commissioning of a new engine for a period specified by permit conditions, provided the operator takes measures to reduce emissions and the duration of the commissioning to the extent possible. The commissioning period shall not exceed 150 operating hours.

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

(Adopted December 1, 1978)(Amended July 8, 1983)(Amended November 6, 2009)
(Amended September 5, 2014)

RULE 1111 – REDUCTION OF NO_X EMISSIONSFROM NATURAL-GAS-FIRED, FAN-TYPE CENTRAL FURNACES

(a) Purpose and Applicability

The purpose of this rule is to reduce NOx emissions from natural gas-fired, fan-type central furnaces, as defined in this rule. This rule applies to manufacturers, distributors, sellers and installers of residential and commercial fan-type central furnaces, requiring either single-phase or three-phase electric supply, used for comfort heating with a rated heat input capacity of less than 175,000 BTU per hour, or, for combination heating and cooling units, a cooling rate of less than 65,000 BTU per hour.

(b) Definitions

(1) ANNUAL FUEL UTILIZATION EFFICIENCY (AFUE) is defined in Section 10.1 of Code of Federal Regulations, Title 10, Part 430, Subpart B, Appendix N.

(2) BTU means British thermal unit or units.

(3) CONDENSING FURNACE means a high-efficiency furnace that uses a second heat exchanger to extract the latent heat in the flue gas by cooling the combustion gasses to near ambient temperature so that water vapor condenses in the heat exchanger, is collected and drained.

(4) 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) a RATED HEAT INPUT CAPACITY of less than 175,000 BTU per hour; or

(B) for combination heating and cooling units, a cooling rate of less than 65,000 BTU per hour.

(5) HEAT INPUT means the higher heating value of the fuel to the furnace measured as BTU per hour.

(6) NOx EMISSIONS means the sum of nitrogen oxide and nitrogen dioxide (oxides of nitrogen) in the flue gas, collectively expressed as nitrogen dioxide.

(7) RATED HEAT INPUT CAPACITY means the gross HEAT INPUT of the combustion device.

(8) RESPONSIBLE OFFICIAL means:

(A) For a corporation: a president or vice-president of the corporation in charge of a principal business function or a duly authorized person who performs similar policy-making functions for the corporation, or

(B) For a partnership or sole proprietorship: general partner or proprietor, respectively.

(9) SINGLE FIRING RATE means the burners and control system are designed to operate at only one fuel input rate and the control system cycles burners between the maximum heat output and no heat output.

(10) USEFUL HEAT DELIVERED TO THE HEATED SPACE is the AFUE (expressed as a fraction) multiplied by the heat input.

(11) VARIABLE FIRING RATE means the burners and control system are designed to operate at more than one fuel input rate and the control system cycles burners between two or more heat output rates and no heat output.

(12) WEATHERIZED means designed for installation outside of a building, equipped with a protective jacket and integral venting, and labeled for outdoor installation.

(c) 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 paragraph (c)(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 paragraph (c)(3).

(3) Natural-gas-fired, fan-type central furnaces shall:

(A) not emit more than 40 nanograms of oxides of nitrogen (calculated as NO_2) per joule of useful heat delivered to the heated space; and

(B) be certified in accordance with subdivision (d) of this rule.

(4) On or after October 1, 2012, a person shall not manufacture, supply, sell, offer for sale, or install, for use in the South Coast Air Quality Management District, natural-gas-fired, fan-type central furnaces subject to this rule, unless such furnace complies with the applicable emission limit and compliance date set forth in Table 1 and is certified in accordance with subdivision (d) of this rule.

Table 1 – Furnace NOx Limits and Compliance Schedule

Compliance Date	**Equipment Category**	**NOx Emission Limit (nanograms/Joule *)**
October 1, 2012	Mobile Home Furnace	40
April 1, 2015	Condensing Furnace	14
October 1, 2015	Non-condensing Furnace	14
October 1, 2016	Weatherized Furnace	14
October 1, 2018	Mobile Home Furnace	14

* Nanograms of oxides of nitrogen (calculated as NO_2) per joule of useful heat delivered to the heated space

(5) Any manufacturer of fan-type central furnaces regulated by this rule may elect to pay a per unit mitigation fee of $200 for each condensing furnace and $150 for each non-condensing, weatherized or mobile home furnace distributed or sold into the SCAQMD in lieu of meeting the 14 nanogram/Joule NOx emission limit in Table 1 of paragraph (c)(4) of this rule. A manufacturer may elect to pay the per unit mitigation fee for a time period of no more than 36 months after the applicable compliance date in Table 1 of paragraph (c)(4). A manufacturer shall submit an alternate compliance plan for each 12 month time period after the applicable compliance date during which the manufacturer elects to pay the mitigation fee in lieu of meeting the NOx emission limit.

(A) Any manufacturer electing to comply using this mitigation fee option shall submit to the SCAQMD an alternate compliance plan no later than 60 days prior to the applicable compliance date that includes the following:

(i) a letter with the name of the manufacturer requesting the mitigation fee compliance option signed by a responsible official identifying the category of fan-type central furnaces

and the 12 month alternate compliance period that the mitigation fees cover;

(ii) an estimate of the quantity of applicable Rule 1111 fan-type central furnaces to be distributed or sold into the SCAQMD during the alternate compliance period, which estimate shall be based on total distribution and sales records or invoices of condensing, non-condensing, weatherized or mobile home fan-type central furnaces that were distributed or sold into the SCAQMD during the 12 month period of July 1 to June 30 prior to the applicable compliance date, along with supporting documentation;

(iii) a completed SCAQMD Form 400A with company name, identification that application is for an alternate compliance plan (section 7 of form), identification that the request is for the Rule 1111 mitigation fee compliance option (section 9 of form), and signature of the responsible official;

(iv) a check for payment of the alternate compliance plan filing fee (Rule 306, section (c)).

(B) The manufacturer shall submit to the Executive Officer a report signed by the responsible official for the manufacturer identifying by model number the quantity of Rule 1111 fan-type central furnaces actually distributed or sold into SCAQMD and a check for payment of mitigation fees for the applicable 12 month alternate compliance period for the quantity of applicable Rule 1111 fan-type central furnaces distributed or sold into the SCAQMD during the alternate compliance period. The report and the payment of mitigation fees must be submitted to the SCAQMD no later than thirty (30) days after the end of each 12-month mitigation fee alternate compliance period.

(d) 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 AQMD Method 100.1.

(B) Operation of the furnace shall be in accordance with the procedures specified in Section 4.0 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:

$$N = \frac{4.566 \times 10^4 \times P \times U}{H \times C \times E}, \qquad N = \frac{3.655 \times 10^{10} \times P}{(20.9-Y) \times Z \times E}$$

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 CO_2 in water-free flue gas for stoichiometric combustion.

H = gross heating value of fuel, BTU/cu.ft. (60^oF, 30-in. Hg).

C = measured volume percent of CO_2 in water-free flue gas, assuming complete combustion and no CO present.

E = AFUE, percent (calculated using Table 2).

Y = volume percent of O_2 in flue gas.

Z = heating value of gas, joules/cu. meter (0.0^oC, 1 ATM).

(3) At least 120 days prior to the date a furnace model is first shipped to a location in the AQMD for use in the District, 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 by a responsible official 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) Executive Officer approved emission test protocol and emission test results verifying compliance with the applicable NOx limit specified in Table 1.

(e) Identification of Compliant Units

(1) The manufacturer of the furnace complying with subdivisions (c) and (d) shall display the following on the shipping container label and rating plate of the furnace:

(A) Model number;

(B) Heat input capacity;

(C) Applicable NOx emission limit in Table 1; and

(D) Date of manufacture or date code.

(2) Any non-certified furnace shipped to a location in the South Coast Air Quality Management District for distribution or sale outside of the District shall have a label on the shipping container identifying the furnace as not certified for use in the District.

(f) Enforcement

The Executive Officer may periodically conduct such tests as are deemed necessary to ensure compliance with subdivision (c), (d), (e) and (h).

(g) Exemptions

(1) The provisions of this rule shall not apply to furnaces installed in mobile homes before October 1, 2012.

(2) For furnaces manufactured, purchased and delivered to the South Coast Air Quality Management District prior to the applicable compliance date in Table 1, any person may, until 300 days after the applicable compliance date, sell, offer for sale, or install such a furnace in the District, so long as the furnace meets the requirements of paragraph (c)(3) and subdivisions (d) and (e).

(h) Rebate Incentives for Early Compliance

Any manufacturer of natural gas-fired, fan-type central furnaces subject to this rule that distributes and sells into the District furnaces that comply with the 14 nanograms/Joule emission limit 90 days prior to the applicable compliance date in Table 1 of paragraph (c)(4) may submit a compliance plan for early compliance to the Executive Officer and to receive on a first-come first-served basis from the

AQMD a rebate payment of $75 for each 14 nanograms/Joule certified furnace and $90 for each high efficiency 14 nanograms/Joule certified furnace with AFUE of 90% or greater distributed and sold into the District, provided funds are available on the date documentation on the number of units distributed and sold is submitted to the AQMD. Total rebate payments to all manufacturers shall not exceed $3,000,000.

(i) Technology Assessment

On or before April 1, 2013, the Executive Officer shall conduct a technology assessment and shall report to the Governing Board on the status of manufacturers' progress towards compliance with the 14 nanograms/Joule emission limit for nitrogen oxides.

(Adopted February 7, 1986)(Amended December 4, 2009)

RULE 1112.1. EMISSIONS OF PARTICULATE MATTER AND CARBON MONOXIDE FROM CEMENT KILNS

(a) Definitions

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

(1) Kiln Feed means all materials except fuels entering the kiln, including raw feed and recycle dust, measured on a dry basis.

(2) Cement Kiln is a device for the calcining and clinkering of limestone, clay, other raw materials and recycle dust in the dry-process manufacture of gray cement.

(3) Clinker is a mass of fused material produced in a cement kiln from which the finished cement is manufactured by milling and grinding.

(4) Clinker Cooler is a device for the air-cooling of clinker, into which the clinker is discharged from the cement kiln.

(b) Requirements

(1) No person shall operate a cement kiln and clinker cooler capable of discharging particulate matter into the atmosphere unless such discharge of particulate matter into the atmosphere from such cement kiln and clinker cooler when combined is limited to no more than:

(A) 0.40 pound per ton of kiln feed for kiln feed rates less than 75 tons per hour.

(B) 30 pounds per hour for kiln feed rates of 75 tons per hour or greater.

(2) No person shall operate a cement kiln capable of emitting carbon monoxide (CO) into the atmosphere unless the CO concentration is limited to no more than:

(A) the limit of Rule 407(a)(1); or

(B) 1,900 ppm averaged over eight (8) consecutive hours and 6,000 ppm averaged over fifteen (15) consecutive minutes, both corrected to 3% oxygen (O_2) by volume, and measured on a dry basis.

(c) Compliance Determination

(1) For the purposes of this rule, particulate matter emissions from the cement kiln and clinker cooler shall be measured concurrently and shall be averaged over one hour.

(2) Measurement of particulate matter emissions from the clinker cooler shall provide for the evaporation and heating of any impinger solutions at a temperature of at least 800°C for at least 30 minutes prior to weighing.

(3) Measurement of particulate matter emissions from the cement kiln shall provide for concurrent measurement of particulate matter emissions and sulfur dioxide emissions. Any measured gaseous sulfur dioxide emissions shall be excluded from the measurement of particulate matter emissions by subtracting from the mass of material collected in any impingers a mass equivalent to the amount of measured sulfur dioxide emissions based upon sulfuric acid dihydrate.

(4) Measurement, monitoring and recordkeeping of carbon monoxide (CO) emissions from the cement kiln shall be conducted according to the provisions of District Rule 218 – Continuous Emission Monitoring.

(5) A District approved Continuous Emissions Monitoring System (CEMS) for carbon monoxide (CO) and oxygen (O_2) must be installed no later than December 31, 2009, or prior to commencement of operation for sources beginning operation after December 4, 2009, and operated according to the provisions of District Rule 218 – Continuous Emission Monitoring.

(6) The CEMS certification tests and other sampling, analysis, and reporting shall be conducted by a laboratory that has been approved under the District Laboratory Approval Program (LAP) for the cited District reference test methods, where LAP approval is available. For District reference test methods for which no LAP program is available, the LAP approval requirement shall become effective one year after the date that the LAP program becomes available

(d) Test Methods

(1) Carbon Monoxide emission concentration shall be determined according to the procedures in District Source Test Method 100.1 – Instrumental Analyzer Procedures for Continuous Gaseous Emission Sampling.

(2) Particulate matter emissions shall be determined according to the procedures in District Source Test Method 5.3 – Determination of Particulate Matter from Stationary Sources Using an In-Stack Filter.

(3) Other test methods may be used as determined to be equivalent and approved before the test in writing by the Executive Officer, the California Air Resources Board, and the United States Environmental Protection Agency.

(e) Exemptions

Cement kilns and clinker coolers subject to the provisions of this rule shall be exempt from the provisions of Rule 404 and Rule 405.

(Adopted January 8, 1982)(Amended January 6, 1984)

Rule 1112. Emissions of Oxides of Nitrogen from Cement Kilns

(a) Definitions

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

(1) Cement kiln is a device for the calcining and clinkering of limestone, clay and other raw materials in the dry-process manufacture of gray cement.

(2) Clinker is a mass of fused material produced in a cement kiln from which the finished cement is manufactured by milling and grinding.

(3) Energy recovery is the use of waste heat from a permit unit in another permit unit on the same premises so that not less than five percent of the total waste heat is recovered for useful purposes at the first stage of heat transfer.

(4) Start-up is that period of time during which a cement kiln is heated to operating temperature from a lower temperature.

(5) Shut-down is that period of time during which the cement kiln is allowed to cool from operating temperature to a lower temperature.

(b) Requirements

(1) No person shall operate a cement kiln capable of discharging nitrogen oxides into the atmosphere unless such discharge of nitrogen oxides into the atmosphere is limited to no more than 3.1 lbs, of nitrogen oxides per ton of clinker produced.

(2) For installations using energy recovery, the emission limit shall be based on the following equation:

$$\text{Energy Recovery Based Emission Limit} = \text{Emission Limit} \times A$$

$$\text{Where: Emission Limit} = 3.1 \text{ lbs. } NO_x\text{/ton of clinker}$$

$$A = 1 + \frac{\text{Energy Recovered (BTU/hr}}{\text{Kiln Heat Input (BTU/hr)}}$$

(3) The energy recovered shall not be required for compliance with any other District rule, used as an offset pursuant to Regulation XIII, banked as an emission reduction credit, nor used for alternative emission control pursuant to Rule 1100.

(4) Kiln Heat input shall be based on the higher heating value of the fuel fired.

(c) Compliance Determination

(1) All emission determinations shall be made in the as-found operating condition, except no compliance determination shall be established during start-up, shut-down, or under breakdown conditions.

(2) For the purposes of this rule, nitrogen oxides shall be calculated as NO_2 on a dry basis, or by an alternative method approved by the Executive Officer.

(3) The averaging time for the measurement of nitrogen oxides for compliance determination shall be 3 hours, except if an operator installs and operates a continuous NO_x monitor in accordance with conditions set forth by the Executive Officer, the averaging time may be extended to 24 hours.

(4) The following expression shall be used to convert uncorrected observed volume in parts per million of NO_x to pounds of NO_x per ton of clinker produced at standard conditions of 68° F and 29 inches of mercury:

$$\frac{(\text{PPMV NOx})\ (46\ \text{grams/mole})(1.56 \times 10^{-7})(\text{SDCFM})}{\text{Ton/hour of clinker}} = \frac{\text{lbs. } NO_x}{\text{Ton of Clinker}}$$

(d) Effective Date

The operator o f any cement manufacturing facility, subject to this rule, shall comply with the provisions of this rule on or before July 1, 1986. The Executive Officer shall, within 30 days after January 1, 1986, conduct a public hearing to review the emission limit of 3.1 pounds of NO_x per ton of clinker produced. If the Executive officer determines that the emission limit is not supported by the evidence presented at the public hearing, the compliance date and/or the emission limit shall be modified to the extent supported by the evidence.

(Adopted Sept. 2, 1977)(Amended Dec. 2, 1977)(Amended Feb. 3, 1978)
(Amended Sept. 5, 1980)(Amended Apr. 3, 1981)(Amended July 3, 1981)
(Amended by California Air Resources Board Oct. 21, 1981)
(Amended Aug. 5, 1983)(Amended Mar. 16, 1984)(Amended Aug. 2, 1985)
(Amended Nov. 1, 1985)(Amended Feb. 6, 1987)(Amended Jan. 5, 1990)
(Amended Feb. 2, 1990)(Amended Nov. 2, 1990)(Amended Dec. 7, 1990)
(Amended Sept. 6, 1991)(Amended March 8, 1996)(Amended August 9, 1996)
(Amended November 8, 1996)(Amended May 14, 1999; Vacated)
(Amended July 20, 2001)(Amended December 6, 2002)(Amended December 5, 2003)
(Amended July 9, 2004)(Amended June 9, 2006)(Amended July 13, 2007)
(Amended June 3, 2011)

RULE 1113. ARCHITECTURAL COATINGS

(a) Applicability

This rule is applicable to any person who supplies, sells, markets, offers for sale, or manufactures any architectural coating in the District that is intended to be field applied to stationary structures or their appurtenances, and to fields and lawns; as well as any person who applies, stores at a worksite, or solicits the application of any architectural coating within the District. The purpose of this rule is to limit the VOC content of architectural coatings used in the District or to allow the averaging of such coatings, as specified, so their actual emissions do not exceed the allowable emissions if all the averaged coatings had complied with the specified limits.

(b) Definitions

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

(1) AEROSOL COATING PRODUCT means 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 marking and traffic marking applications.

(2) ALUMINUM ROOF COATINGS are roof coatings containing at least 0.7 pounds per gallon (84 grams per liter) of coating as applied, of elemental aluminum pigment.

(3) APPURTENANCES are accessories to a stationary structure, including, but not limited to: hand railings, cabinets, bathroom and kitchen fixtures, fences, rain-gutters and down-spouts, window screens, lamp-posts, heating and air conditioning equipment, other mechanical equipment, large fixed

stationary tools, signs, motion picture and television production sets, and concrete forms.

(4) ARCHITECTURAL COATINGS are any coatings applied to stationary structures and their appurtenances, to fields and lawns..

(5) BELOW-GROUND WOOD PRESERVATIVES are wood preservatives formulated to protect below-ground wood.

(6) BITUMINOUS COATING MATERIALS are black or brownish coating materials, soluble in carbon disulfide, consisting mainly of hydrocarbons and which are obtained from natural deposits, or as residues from the distillation of crude petroleum oils, or of low grades of coal.

(7) BITUMINOUS ROOF PRIMERS are primers formulated for or applied to roofing that incorporate bituminous coating materials.

(8) BOND BREAKERS are coatings formulated for or applied between layers of concrete to prevent the freshly poured top layer of concrete from bonding to the substrate over which it is poured.

(9) CLEAR WOOD FINISHES are clear and semi-transparent coatings, including lacquers and varnishes, applied to wood substrates, including floors, decks and porches, to provide a transparent or translucent solid film.

(10) COATING is a material which is applied to a surface in order to beautify, protect, or provide a barrier to such surface.

(11) COLORANTS are solutions of dyes or suspensions of pigments.

(12) CONCRETE-CURING COMPOUNDS are coatings formulated for or applied to freshly poured concrete to retard the evaporation of water. Concrete-curing compounds manufactured and used for roadways and bridges (does not include curbs and gutters, sidewalks, islands, driveways and other miscellaneous concrete areas) are those concrete-curing compounds that meet ASTM Designation C309, Class B, and meet a loss of water standard of less than 0.15-kg/m^2 in 24 hours as determined by the California Transportation Department, California Test 534.

(13) CONCRETE SURFACE RETARDERS are coatings containing one or more ingredients such as extender pigments, primary pigments, resins, and solvents that interact chemically with the cement to prevent hardening on the surface where the retarder is applied, allowing the mix of cement and sand at the surface to be washed away to create an exposed aggregate finish.

(14) DRIVEWAY SEALERS are coatings that are applied to worn asphalt driveway surfaces in order to:

(A) Fill cracks;

(B) Seal the surface to provide protection; or

(C) Restore or preserve the surface appearance.

(15) DRY-FOG COATINGS are coatings which are formulated only for spray application so that when sprayed, overspray droplets dry before falling on floors and other surfaces.

(16) EXEMPT COMPOUNDS (See Rule 102-Definition of Terms.)

(17) FAUX FINISHING COATINGS are coatings that meet one or more of the following subcategories:

(A) GLAZES, which are coatings designed for wet-in-wet techniques used to create artistic effects, including but not limited to dirt, old age, smoke damage, simulated marble and wood grain finishes, decorative patterns, color blending, and wet edge techniques.

(B) DECORATIVE COATINGS, which are coatings used to create a gonioapparent appearance, such as metallic, iridescent, or pearlescent appearance, that contain at least 48 grams of pearlescent mica pigment or other iridescent pigment per liter of coating as applied (at least 0.4 pounds per gallon).

(C) JAPANS, which are pure concentrated pigments, finely ground in a slow drying vehicle used by Motion Picture and Television Production Studios to create artistic effects, including but not limited to, dirt, old age, smoke damage, water damage, and simulated marble and wood grain.

(D) TROWEL APPLIED COATINGS, which are coatings applied by trowel that are used to create aesthetic effects, including, but not limited to polished plaster, clay, suede and dimensional, tactile textures.

(E) CLEAR TOPCOATS, which are clear coatings used to enhance, seal and protect a Faux Finishing coating that meets the requirements of subsection (b)(18)(A), (B), (C) or (D). These clear topcoats must be sold and used solely as part of a Faux Finishing coating system, and must be labeled in accordance paragraph (d)(7).

(18) FIRE-PROOFING COATINGS are opaque coatings formulated to protect the structural integrity of steel and other construction materials and listed by Underwriter's Laboratories, Inc. for the fire protection of steel.

(19) FLAT COATINGS are coatings that register a gloss of less than 15 on an 85-degree meter or less than 5 on a 60-degree meter.

(20) FLOOR COATINGS are opaque coatings that are formulated for or applied to flooring; including but not limited to garages, decks, and porches, and clear coatings formulated for or applied to concrete flooring, but do not include Industrial Maintenance Coatings.

(21) FORM RELEASE COMPOUNDS are coatings designed for or applied to a concrete form to prevent the freshly poured concrete from bonding to the form. The form may consist of metal, wood, or some material other than concrete.

(22) FORMULATION DATA is the actual product recipe which itemizes all the ingredients contained in a product including VOCs and the quantities thereof used by the manufacturer to create the product. Material Safety Data Sheets (MSDS) are not considered formulation data.

(23) GONIOAPPARENT means a change in appearance with a change in the angle of illumination or the angle of view, as defined according to ASTM E 284.

(24) GRAMS OF VOC PER LITER OF COATING OR COLORANT, LESS WATER AND LESS EXEMPT COMPOUNDS, is the weight of VOC per combined volume of VOC and coating or colorant solids and can be calculated by the following equation:

$$\text{Grams of VOC per Liter of Coating, Less Water and Less Exempt Compounds} = \frac{W_s - Ww - Wes}{Vm - Vw - Ves}$$

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

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:

$$\text{Grams of VOC per Liter of Coating, Less Water and Less Exempt Compounds} = \frac{Ws - Ww - Wes}{Vm - Vw - Ves}$$

Where:

Ws	=	weight of volatile compounds emitted during curing, in grams
Ww	=	weight of water emitted during curing, in grams
Wes	=	weight of exempt compounds emitted during curing, in grams
Vm	=	volume of the material prior to reaction, in liters
Vw	=	volume of water emitted during curing, in liters
Ves	=	volume of exempt compounds emitted during curing, in liters

(25) GRAMS OF VOC PER LITER OF MATERIAL is the weight of VOC per volume of material and can be calculated by the following equation:

$$\text{Grams of VOC per Liter of Material} = \frac{Ws - Ww - Wes}{Vm}$$

Where:

Ws	=	weight of volatile compounds in grams
Ww	=	weight of water in grams
Wes	=	weight of exempt compounds in grams
Vm	=	volume of the material in liters

(26) GRAPHIC ARTS COATINGS (Sign Paints) are coatings formulated for hand-application by artists using brush or roller techniques to indoor and outdoor signs (excluding structural components) and murals, including lettering enamels, poster colors, copy blockers, and bulletin enamels.

(27) HIGH-TEMPERATURE INDUSTRIAL MAINTENANCE COATINGS are industrial maintenance coatings formulated for or applied to substrates exposed continuously or intermittently to temperatures above 400 degrees Fahrenheit.

(28) INDUSTRIAL MAINTENANCE COATINGS are coatings, including primers, sealers, undercoaters, intermediate coatings and topcoats, formulated for or applied to substrates, including floors, that are exposed to one or more of the following extreme environmental conditions:

(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 similar chemicals, chemical fumes, chemical mixtures, or solutions;

(C) Repeated exposure to temperatures in excess of 250 degrees Fahrenheit;

(D) Repeated heavy abrasion, including mechanical wear and repeated scrubbing with industrial solvents, cleaners, or scouring agents; or

(E) Exterior exposure of metal structures.

(29) INTERIOR STAINS are stains labeled and formulated exclusively for use on interior surfaces.

(30) LACQUERS are clear or pigmented wood finishes, including clear lacquer sanding sealers, formulated with nitrocellulose or synthetic resins to dry by evaporation without chemical reaction.

(31) LOW-SOLIDS COATINGS are coatings containing one pound or less of solids per gallon of material.

(32) MAGNESITE CEMENT COATINGS are coatings formulated for or applied to magnesite cement decking to protect the magnesite cement substrate from erosion by water.

(33) MANUFACTURER is any person, company, firm, or establishment who imports, blends, assembles, produces, packages, repackages, or re-labels an architectural coating, not including retail outlets where labels or stickers may be affixed to containers or where colorant is added at the point of sale.

(34) MARKET means to facilitate sales through third party vendors, including but not limited to catalog or ecommerce sales that bring together buyers and sellers. For the purposes of this rule, market does not mean to generally promote or advertise coatings.

(35) MASTIC COATINGS are coatings formulated to cover holes and minor cracks and to conceal surface irregularities, and applied in a thickness of at least 10 mils (dry, single coat).

(36) METALLIC PIGMENTED COATINGS are coatings, excluding roof coatings, containing at least 0.4 pounds per gallon (48 grams/liter) of coating, as applied, of elemental metallic pigment (excluding zinc). Effective July 1, 2012, metallic pigmented coatings are decorative coatings, excluding industrial maintenance and roof coatings, containing at least 0.4 pounds per gallon (48 grams/liter) of coating, as applied, of elemental metallic pigment (excluding zinc).

(37) MULTI-COLOR COATINGS are coatings which exhibit more than one color when applied and which are packaged in a single container and applied in a single coat.

(38) NONFLAT COATINGS are coatings that are not defined under any other definition in this rule and that register a gloss of 5 or greater on a 60 degree meter and a gloss of 15 or greater on an 85 degree meter according to ASTM Test Method D 523 as specified in paragraph (e)(6).

(39) NON-SACRIFICIAL ANTI-GRAFFITI COATINGS are clear or opaque Industrial Maintenance Coatings formulated and recommended to deter adhesion of graffiti and to resist repeated scrubbing and exposure to harsh solvents, cleansers, or scouring agents used to remove graffiti.

(40) PEARLESCENT means exhibiting various colors depending on the angles of illumination and viewing, as observed in mother-of-pearl.

(41) PIGMENTED means containing colorant or dry coloring matter, such as an insoluble powder, to impart color to a substrate.

(42) POST-CONSUMER COATINGS are finished coatings that would have been disposed of in a landfill, having completed their usefulness to a consumer, and does not include manufacturing wastes.

(43) PRE-TREATMENT WASH PRIMERS are coatings which contain a minimum of 1/2 percent acid, by weight, applied directly to bare metal surfaces to provide necessary surface etching.

(44) PRIMERS are coatings applied to a surface to provide a firm bond between the substrate and subsequent coats.

(45) PRODUCT LINE is a line of coatings reported under one product number and name and subject to one coating VOC limit as specified in subdivision (c) Table of Standards.

(46) QUICK-DRY ENAMELS are non-flat, high gloss coatings which comply with the following:

(A) Shall be capable of being applied directly from the container by brush or roller under normal conditions, normal conditions being ambient temperatures between 60°F and 80°F; and

(B) When tested in accordance with ASTM D 1640 they shall: set-to-touch in two hours or less, dry-hard in eight hours or less, and be tack-free in four hours or less by the mechanical test method. Effective July 1, 2011, coatings classified as quick-dry enamels are subsumed by the non-flat coating category.

(47) QUICK-DRY PRIMERS, SEALERS, AND UNDERCOATERS are primers, sealers, and undercoaters which are intended to be applied to a surface to provide a firm bond between the substrate and subsequent coats and which are dry-to-touch in one-half hour and can be recoated in two hours (ASTM D 1640). Effective July 1, 2011, coatings classified as quick-dry primers, sealers, and undercoaters are subsumed by the primer, sealer, undercoater category.

(48) REACTIVE DILUENT is a liquid which is a VOC during application and one in which, through chemical and/or physical reaction, such as polymerization, becomes an integral part of the coating.

(49) REACTIVE PENETRATING SEALERS are clear or pigmented coatings 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. Reactive Penetrating Sealers must meet the following criteria:

(A) Used only for reinforced concrete bridge structures for transportation projects within 5 miles of the coast or above 4,000 feet elevation or for restoration and/or preservation projects on registered historical buildings that are under the purview of a restoration architect.

(B) Penetrate into concrete and masonry substrates and chemically react to form covalent bonds with naturally occurring minerals in the substrate.

(C) Line the pores of concrete and masonry substrates with a hydrophobic coating, but do not form a surface film.

(D) Improve water repellency at least 80 percent after application on a concrete or masonry substrate. This performance must be verified on standardized test specimens, in accordance with one or more of the following standards: ASTM C67, or ASTM C97, or ASTM C140.

(E) Not reduce the water vapor transmission rate by more than 2 percent after application on a concrete or masonry substrate. This performance must be verified on standardized test specimens, in accordance with ASTM E96/E96M.

(F) Meet the performance criteria listed in the National Cooperative Highway Research Report 244 (1981), surface chloride screening applications, for products labeled and formulated for vehicular traffic.

(50) RECYCLED COATINGS are coatings formulated such that 50 percent or more of the total weight consists of secondary and post-consumer coatings and 10 percent or more of the total weight consists of post-consumer coatings, and manufactured by a certified recycled paint manufacturer.

(51) RESTORATION ARCHITECT is an architect that has a valid certificate of registration as an architect issued by the California State Board of Architectural Examiners or the National Council of Architectural Registration Boards and working on registered historical restoration and/or preservation projects.

(52) RETAIL OUTLET means any establishment at which architectural coatings are sold or offered for sale to consumers.

(53) ROOF COATINGS are coatings formulated for application to exterior roofs for the primary purpose of preventing penetration of the substrate by water, or reflecting heat and ultraviolet radiation.

(54) RUST PREVENTATIVE COATINGS are coatings formulated for use in preventing the corrosion of metal surfaces in residential and commercial situations.

(55) SACRIFICIAL ANTI-GRAFFITI COATINGS are non-binding, clear coatings which are formulated and recommended for applications that allow for the removal of graffiti primarily by power washing.

(56) SANDING SEALERS are clear wood coatings formulated for or applied to bare wood for sanding and to seal the wood for subsequent application

of coatings. Until July 1, 2013, to be considered a sanding sealer a coating must be clearly labeled as such.

(57) SEALERS are coatings applied to either block materials from penetrating into or leaching out of a substrate, to prevent subsequent coatings from being absorbed by the substrate, or to prevent harm to subsequent coatings by materials in the substrate.

(58) SECONDARY (REWORK) COATINGS are fragments of finished coatings or finished coatings from a manufacturing process that has converted resources into a commodity of real economic value, but does not include excess virgin resources of the manufacturing process.

(59) SHELLACS are clear or pigmented coatings formulated solely with the resinous secretions of the lac insect (laccifer lacca). Shellacs are formulated to dry by evaporation without a chemical reaction providing a quick-drying, solid, protective film for priming and sealing stains and odors; and for wood finishing excluding floors effective January 1, 2007.

(60) SOLICIT is to require for use or to specify, by written or oral contract.

(61) SPECIALTY PRIMERS are coatings formulated for or applied to a substrate to seal fire, smoke or water damage; or to condition excessively chalky surfaces. An excessively chalky surface is one that is defined as having chalk rating of four or less as determined by ASTM D-4214 – Photographic Reference Standard No. 1 or the Federation of Societies for Coatings Technology "Pictorial Standards for Coatings Defects".

(62) STAINS are opaque or semi-transparent coatings which are formulated to change the color but not conceal the grain pattern or texture.

(63) STATIONARY STRUCTURES include but are not limited to, homes, office buildings, factories, mobile homes, pavements, curbs, roadways, racetracks, and bridges.

(64) STONE CONSOLIDANTS are coatings that are labeled and formulated for application to stone substrates to repair historical structures that have been damaged by weathering or other decay mechanisms. Stone Consolidants must meet the following criteria:

(A) Used only for restoration and/or preservation projects on registered historical buildings that are under the purview of a restoration architect.

(B) Penetrate into stone substrates to create bonds between particles and consolidate deteriorated material.

(C) Specified and used in accordance with ASTM E2167.

(65) SWIMMING POOL COATINGS are coatings specifically formulated for or applied to the interior of swimming pools, including but not limited to water park attractions, ponds and fountains, to resist swimming pool chemicals.

(66) SWIMMING POOL REPAIR COATINGS are chlorinated, rubber-based coatings used for the repair and maintenance of swimming pools over existing chlorinated, rubber-based coatings.

(67) TINT BASE is an architectural coating to which colorants are added.

(68) TRAFFIC COATINGS are coatings formulated for or applied to public streets, highways, and other surfaces including, but not limited to, curbs, berms, driveways, and parking lots.

(69) UNDERCOATERS are coatings formulated for or applied to substrates to provide a smooth surface for subsequent coats.

(70) VARNISHES are clear or pigmented wood finishes formulated with various resins to dry by chemical reaction.

(71) VOLATILE ORGANIC COMPOUND (VOC) is as defined in Rule 102 – Definition of Terms. For the purpose of this rule, tertiary butyl acetate (tBAc) shall be considered exempt as a VOC only for purposes of VOC emissions limitations or VOC content requirements and will continue to be a VOC for purposes of all recordkeeping, emissions reporting, photochemical dispersion modeling, and inventory requirements which apply to VOCs, when used in industrial maintenance coatings, including zinc-rich industrial maintenance coatings and non-sacrificial anti-graffiti coatings.

(72) WATERPROOFING SEALERS are coatings which are formulated for the primary purpose of preventing penetration of porous substrates by water.

(73) WATERPROOFING CONCRETE/MASONRY SEALERS are clear or pigmented sealers that are formulated for sealing concrete and masonry to provide resistance against water, alkalis, acids, ultraviolet light, or staining.

(74) WOOD PRESERVATIVES are coatings formulated to protect wood from decay or insect attack by the addition of a wood preservative chemical registered by the California Environmental Protection Agency.

(75) WORKSITE means any location where architectural coatings are stored or applied.

(76) ZINC-RICH INDUSTRIAL MAINTENANCE PRIMERS are primers formulated to contain a minimum of 65 percent metallic zinc powder (zinc dust) by weight of total solids for application to metal substrates.

(c) Requirements

(1) Except as provided in paragraphs (c)(3), (c)(4), and designated coatings averaged under (c)(6), no person shall supply, sell, offer for sale, market, manufacture, blend, repackage, apply, store at a worksite, or solicit the application of any architectural coating within the District:

(A) That is listed in the Table of Standards 1 and contains VOC (excluding any colorant added to tint bases) in excess of the corresponding VOC limit specified in the table, after the effective date specified; or

(B) That is not listed in the Table of Standards 1, and contains VOC (excluding any colorant added to tint bases) in excess of 250 grams of VOC per liter of coating (2.08 pounds per gallon), less water, less exempt compounds, until January 1, 2014, at which time the limit drops to 50 grams of VOC per liter of coating, less water, less exempt compounds (0.42 pounds per gallon).

(2) No person within the District shall add colorant at the point of sale that is listed in the Table of Standards 2 and contains VOC in excess of the corresponding VOC limit specified in the Table of Standards 2, after the effective date specified.

TABLE OF STANDARDS 1
VOC LIMITS

Grams of VOC Per Liter of Coating, Less Water and Less Exempt Compounds

COATING CATEGORY	Ceiling Limit[1]	Current Limit[2]	Effective Date		
			7/1/08	1/1/12	1/1/14
Bond Breakers		350			
Clear Wood Finishes		275			
Varnish	350	275			
Sanding Sealers	350	275			
Lacquer		275			
Concrete-Curing Compounds		100			
Concrete-Curing Compounds For Roadways and Bridges[3]		350			
Concrete Surface Retarder		250			50
Driveway Sealer		100		50	
Dry-Fog Coatings		150			50
Faux Finishing Coatings					
Clear Topcoat		350		200	
Decorative Coatings		350			100
Glazes		350			
Japan		350			
Trowel Applied Coatings		350		150	50
Fire-Proofing Coatings		350			150
Flats	250	50	50		
Floor Coatings	100	50			
Form Release Compound		250			100
Graphic Arts (Sign) Coatings		500			150
Industrial Maintenance (IM) Coatings	420	100			
High Temperature IM Coatings		420			
Non-Sacrificial Anti-Graffiti Coatings		100			
Zinc-Rich IM Primers	340	100			
Magnesite Cement Coatings		450			
Mastic Coatings		300			100
Metallic Pigmented Coatings	500	500			150
Multi-Color Coatings		250			
Nonflat Coatings	150	50			
Pre-Treatment Wash Primers		420			
Primers, Sealers, and Undercoaters	200	100			
Reactive Penetrating Sealers		350			
Recycled Coatings		250			
Roof Coatings	250	50			
Roof Coatings, Aluminum		100			
Roof Primers, Bituminous	350	350			
Rust Preventative Coatings	400	100			
Stone Consolidant		450			
Sacrificial Anti-Graffiti Coatings		100		50	
Shellac					
Clear		730			
Pigmented		550			
Specialty Primers	350	100			
Stains		100			

COATING CATEGORY	Ceiling Limit[1]	Current Limit[2]	Effective Date		
			7/1/08	1/1/12	1/1/14
Stains, Interior	250	250			
Swimming Pool Coatings					
Repair		340			
Other		340			
Traffic Coatings		100			
Waterproofing Sealers	250	100			
Waterproofing Concrete/Masonry Sealers	400	100			
Wood Preservatives		350			

1. The specified ceiling limits are applicable to products sold under the Averaging Compliance Option.
2. The specified limits remain in effect unless revised limits are listed in subsequent columns in the Table of Standards.
3. Does not include compounds used for curbs and gutters, sidewalks, islands, driveways and other miscellaneous concrete areas.

TABLE OF STANDARDS 1 (cont.)
VOC LIMITS

Grams of VOC Per Liter of Material

COATING	Limit
Low-Solids Coating	120

TABLE OF STANDARDS 2
VOC LIMITS FOR COLORANTS

Grams of VOC Per Liter of Colorant
Less Water and Less Exempt Compounds

COLORANT	Limit[4]
Architectural Coatings, excluding IM Coatings	50
Solvent-Based IM	600
Waterborne IM	50

4. Effective January 1, 2014.

(3) Coating Categorization

(A) If anywhere on the container of any coating listed in either Table of Standards, on any sticker or label affixed thereto, or in any sales or advertising literature, any representation is made that the coating may be used as, or is suitable for use as, a coating for which a lower VOC standard is specified in the table or in paragraph (c)(1), then the lowest VOC standard shall apply.

(B) The provisions of paragraph (c)(3)(A) shall not apply to a coating described in part as a flat, nonflat or primer-sealer-undercoater

coating, or represented in part for use on flooring, provided that all of the following requirements are met:

(i) The coating meets the definition of a specific coating category for which a higher VOC standard is specified in the Table of Standards, and

(ii) The coating is labeled in a manner consistent with the definition and all the specific labeling requirements for that specific coating category, and

(iii) The coating is suitable and only recommended for the intended uses of that specific coating category.

(4) Sell-Through Provision

Any coating that is manufactured prior to the effective date of the applicable limit specified in the Table of Standards, and that has a VOC content above that limit (but not above the limit in effect on the date of manufacture), may be sold, supplied, offered for sale, or applied for up to three years after the specified effective date. The manufacturer shall maintain sales and distribution records, as applicable, for any coating manufactured prior to the effective date if that coating volume is not included in an approved Averaging Compliance Option [specified in paragraph (c)(6) of this rule] Program that includes the same coating manufactured on or after the effective date. Such records shall clearly indicate the date of manufacture (or date code or batch code) and volume of coating sold or distributed to distinguish between those coatings subject to the provisions of this paragraph and those subject to the provisions of Appendix A section (K). These records shall be made available to the Executive Officer upon request and shall be maintained for a period of at least three years after the end of a compliance period of the Averaging Compliance Option Program.

(5) All architectural coating containers used to apply the contents therein to a surface direct from said container by pouring, siphoning, brushing, rolling, padding, ragging or other means, shall be closed when not in use. These architectural coating containers include, but should not be limited to: drums, buckets, cans, pails, trays or other application containers.

(6) Averaging Compliance Option

Until January 1, 2015, in lieu of specific compliance with the applicable limits in the Table of Standards, manufacturers may average designated coatings such that their actual cumulative emissions from the averaged coatings are less than or equal to the cumulative emissions that would have been allowed under those limits over a compliance period not to exceed one year.

(A) The following coatings may be averaged until December 31, 2011: bituminous roof primers; floor coatings; industrial maintenance coatings; interior stains; metallic pigmented coatings; primers, sealers, and undercoaters; roof coatings; rust preventative coatings; sanding sealers; specialty primers; stains; waterproofing concrete/masonry sealers; waterproofing sealers; varnishes; zinc-rich industrial maintenance primers; as well as flats and nonflats (excluding recycled coatings).

(B) Effective January 1, 2012, only the following coatings may be averaged: floor coatings; industrial maintenance coatings; interior stains; metallic pigmented coatings; rust preventative coatings; sanding sealers; stains; varnishes; as well as flats and nonflats (excluding recycled coatings).

(C) Manufacturers using the Averaging Compliance Option shall:

(i) Comply with the averaging provisions contained in Appendix A, as well as maintain all records for the Averaging Compliance Option (ACO) Program and make these records available to the Executive Officer upon request, for a period of at least three years after the end of the compliance period; and

(ii) Use only the sell-through provision in Appendix A for each coating included in the ACO Program in lieu of the sell-through provision of subparagraph (c)(4).

(7) No person shall apply or solicit the application within the District of any industrial maintenance coatings, except non-sacrificial anti-graffiti coatings, for residential use or for use in areas such as office space and meeting rooms of industrial, commercial or institutional facilities not exposed to such extreme environmental conditions described in the definition of industrial maintenance coatings.

(8) General Prohibition

No person shall supply, sell, market, offer for sale, manufacture, blend, or repackage any architectural coating in the District subject to the provisions of this rule with any materials that contain in excess of 0.1% by weight any Group II exempt compounds listed in Rule 102. Cyclic, branched, or linear, completely methylated siloxanes (VMS) are not subject to this prohibition. This provision is effective January 1, 2012 except that products manufactured prior to the effective date may be sold until January 1, 2013.

(d) Administrative Requirements

(1) Containers for all coatings subject to this rule shall display the date of manufacture of the contents or a code indicating the date of manufacture. The manufacturers of such coatings shall file with the Executive Officer of the District and the Executive Officer of the Air Resources Board an explanation of each code.

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

(3) Each container of any coating subject to this rule shall display the maximum VOC content of the coating, as supplied, and after any thinning as recommended by the manufacturer. The VOC content of low-solids coatings shall be displayed as grams of VOC per liter of material (excluding any colorant added to the tint bases) and the VOC content of any other coating shall be displayed as grams of VOC per liter of coating (less water and less exempt compounds, and excluding any colorant added to tint bases). VOC content displayed may be calculated using product formulation data, or may be determined using the test method in subdivision (e). VOC content calculated from formulation data shall be adjusted by the manufacturer to account for cure volatiles (if any) and maximum VOC content within production batches. Effective January 1, 2014, the VOC shall be displayed on the coating container such that the required language is:

(A) Noticeable and in clear and legible English;

(B) Separated from other text; and

(C) Conspicuous, as compared with other words, statements, designs, or devices in the label as to render it likely to be read and understood by an ordinary individual under customary conditions of purchase or use.

(4) The labels of all rust preventative coatings shall include the statement “For Metal Substrates Only” prominently displayed.

(5) The labels of all specialty primers shall prominently display one or more of the following descriptions:

(A) For fire-damaged substrates.

(B) For smoke-damaged substrates.

(C) For water-damaged substrates.

(D) For excessively chalky substrates.

(6) The labels of concrete-curing compounds manufactured and used for roadways and bridges shall include the statement "FOR ROADWAYS AND BRIDGES ONLY (Not for Use on Curbs and Gutters, Sidewalks, Islands, Driveways and Other Miscellaneous Concrete Areas)" prominently displayed.

(7) Effective January 1, 2012, the labels of all Clear Topcoat for Faux Finishing coatings shall prominently display the statement “This product can only be sold as a part of a Faux Finishing coating system”.

(8) A manufacturer, distributor, or seller of a coating meeting the requirements of this rule, who supplies that coating to a person who applies it in a non-compliant manner, shall not be liable for that non-compliant use, unless the manufacturer, distributor, or seller knows that the supplied coating would be used in a non-compliant manner.

(9) Manufacturers of recycled coatings shall submit a letter to the Executive Officer certifying their status as a Recycled Paint Manufacturer.

(e) Test Methods

For the purpose of this rule, the following test methods shall be used:

(1) VOC Content of Coatings and Colorants

The VOC content of coatings subject to the provisions of this rule shall be determined by:

(A) U.S. EPA Reference Test 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) with the exempt compounds' content determined by Method 303 (Determination of Exempt Compounds) in the South Coast Air Quality Management District's (SCAQMD) "Laboratory Methods of Analysis for Enforcement Samples" manual, or

(B) Method 304 [Determination of Volatile Organic Compounds (VOC) in Various Materials] in the SCAQMD's "Laboratory Methods of Analysis for Enforcement Samples" manual.

(C) Exempt Perfluorocarbons

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

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 when manufacturers specify which individual compounds are used in the coating formulations. In addition, the manufacturers must identify the U.S. EPA, CARB, and SCAQMD approved test methods, which can be used to quantify the amount of each exempt compound.

(2) Acid Content of Coatings

The acid content of a coating subject to the provisions of this rule shall be determined by ASTM Test Method D 1613-85 (Acidity in Volatile Solvents and Chemical Intermediates Used in Paint, Varnish, Lacquer, and Related Products).

(3) Metal Content of Coatings

The metallic content of a coating subject to the provisions of this rule shall be determined by Method 318 (Determination of Weight Percent Elemental Metal in Coatings by X-Ray Diffraction) in the SCAQMD's "Laboratory Methods of Analysis for Enforcement Samples" manual.

(4) Drying Times

The set-to-touch, dry-hard, dry-to-touch, and dry-to-recoat times of a coating subject to the provisions of this rule shall be determined by ASTM Test Method D 1640 (Standard Test Methods for Drying, Curing, or Film Formation of Organic Coatings at Room Temperature). The tack-free time of a coating subject to the provisions of this rule shall be determined by ASTM Test Method D 1640, according to the Mechanical Test Method.

(5) Gloss Determination

The gloss shall be determined by ASTM Test Method D 523 (Specular Gloss).

(6) Gonioapparent Characteristics for Coatings

A coating will be determined to have a gonioapparent appearance by ASTM E 284 (Standard Terminology of Appearance).

(7) Water Repellency for Reactive Penetrating Sealers shall be determined by any of the following:

(A) ASTM C67 (Standard Test Methods for Sampling and Testing Brick and Structural Clay Tile);

(B) ASTM C97/97M (Standard Test Methods for Absorption and Bulk Specific Gravity of Dimension Stone);

(C) ASTM C140 (Standard Test Methods for Sampling and Testing Concrete Masonry Units and Related Units).

(8) Water Vapor Transmission for Reactive Penetrating Sealers shall be determined by ASTM E96/96M (Standard Test Methods for Water Vapor Transmission of Materials).

(9) Selection and Use of Stone Consolidants shall be determined by ASTM E2176 (Standard Guide for Selection and Use of Stone Consolidants).

(10) Chloride Screening for Reactive Penetrating Sealer shall be determined using the National Cooperative Highway Research Report 244 (1981), “Concrete Sealers for the Protection of Bridge Structures”.

(11) Equivalent Test Methods

Other test methods determined to be equivalent after review by the Executive Officer, CARB, and the U.S. EPA, and approved in writing by the District Executive Officer may also be used.

(12) 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.

(13) All test methods referenced in this subdivision shall be the version most recently approved by the appropriate governmental entities.

(f) Exemptions

(1) Until December 31, 2013, the provisions of this rule shall not apply to any architectural coatings in containers having capacities of one liter (1.057 quart) or less, excluding clear wood finishes, varnishes, sanding sealers, lacquers, and pigmented lacquers, provided that the provisions in the subparagraphs below are met. Effective January 1, 2014, the provisions of the Table of Standards and paragraph (c)(1) of this rule shall not apply to any architectural coatings in containers having capacities of one liter (1.057 quart) or less, excluding clear wood finishes, varnishes, sanding sealers, lacquers, and pigmented lacquers, provided the provisions in the subparagraphs below are met:

(A) The manufacturer reports the sales in the Rule 314 Annual Quantity and Emissions Report. The loss of this exemption due to the failure of the manufacturer to submit the Rule 314 Annual Quantity and Emissions Report shall apply only to the manufacturer.

(B) The coating containers are not bundled together to be sold as a unit that exceeds one liter (1.057 quarts), excluding containers packed together for shipping to a retail outlet.

(C) The label or any other product literature does not suggest combining multiple containers so that the combination exceeds one liter (1.057 quarts).

Subparagraphs (f)(1)(B) and (f)(1)(C) are effective July 1, 2011. Products otherwise qualifying for the one liter (1.057 quart) exemption,

manufactured prior to this effective date of July 1, 2011, may be sold until January 1, 2012.

(2) The provisions of this rule shall not apply to:

(A) Architectural coatings supplied, sold, offered for sale, marketed, manufactured, blended, repackaged or stored in this District for shipment outside of this District or for shipment to other manufacturers for repackaging.

(B) Emulsion type bituminous pavement sealers.

(C) Aerosol coating products.

(D) Use of stains and lacquers in all areas within the District at an elevation of 4,000 feet or greater above sea level or sale in such areas for such use.

(3) The provisions of paragraph (c) shall not apply to facilities which apply coatings to test specimens for purposes of research and development of those coatings.

APPENDIX A: Averaging Compliance Option (ACO) Provision

(A) The manufacturer shall demonstrate that actual emissions from the coatings being averaged are less than or equal to the allowable emissions, for the specified compliance period using the following equation:

$$\sum_{i=1}^{n} GiMi \leq \sum_{i=1}^{n} GiViLi$$

Where:

$\sum_{i=1}^{n} GiMi$	=	Actual Emissions
$\sum_{i=1}^{n} GiViLi$	=	Allowable Emissions
Gi	=	Total Gallons of Product (i) subject to Averaging;
Mi	=	Material VOC content of Product (i), as pounds per gallon; {as defined in paragraph (b)(22)}
Vi	=	Percent by Volume Solids and VOC in Product (i), {as defined in paragraph (b)(21)}
	=	$\frac{Vm - Vw - Ves}{Vm}$ *For Non-Zero VOC Coatings*:
	=	$\frac{\text{Material VOC}}{\text{Coating VOC}}$ *For Zero VOC coatings*:
	=	% solids by volume
Li	=	Regulatory VOC Content Limit for Product (i), as pounds per gallon; {as listed in subdivision (c) Table of Standards}

The averaging is limited to coatings that are designated by the manufacturer. Any coating not designated in the ACO Program shall comply with the VOC limit in

the Table of Standards. The manufacturer shall not include any quantity of coatings that it knows or should have known will not be used in the District.

In addition to the requirements specified in Section (A), a manufacturer shall not include in an ACO Program or supply, sell, offer for sale, manufacture, blend, or repackage for use within the District any architectural coating with a VOC content in excess of the ceiling limit in the Table of Standards or the VOC content limits specified in the National VOC Emission Standard, whichever is less.

(B) ACO Program

At least six months prior to the start of the compliance period, manufacturers shall submit an ACO Program, which is subject to all the provisions of Rule 221 – Plans and Rule 306 – Plan Fees, to the Executive Officer. Averaging may not be implemented until the ACO Program is approved in writing by the Executive Officer.

Within 45 days of submittal of an ACO Program, the Executive Officer shall approve, disapprove or deem the ACO Program incomplete. The ACO Program applicant and the Executive Officer may agree to an extension of time for the Executive Officer to take action on the ACO Program.

(C) General Requirements

The ACO Program shall include all necessary information for the Executive Officer to make a determination as to whether the manufacturer may comply with the averaging requirements over the specified compliance period in an enforceable manner. Such information shall include, but is not limited to, the following.

1. An identification of the contact persons, telephone numbers, and name of the manufacturer who is submitting the ACO Program.
2. An identification of each coating that has been selected by the manufacturer for inclusion in this ACO Program that exceeds the applicable VOC limit in the Table of Standards, their VOC content specified in units of both grams of VOC per liter of coating, and grams of VOC per liter of material and the designation of the coating category.

3. A detailed demonstration showing that the projected actual emissions will not exceed the allowable emissions for a single compliance period that the ACO Program will be in effect. In addition, the demonstration shall include VOC content information for each coating that is below the compliance limit in the Table of Standards. The demonstration shall use the equation specified in paragraph (A) of this Appendix for projecting the actual emissions and allowable emissions during each compliance period. The demonstration shall also include all VOC content levels and projected volume to be sold and distributed, as applicable, within the District for each coating listed in the ACO Program during each compliance period. The requested data can be summarized in a matrix form.
4. A specification of the compliance period(s) and applicable reporting dates. The length of the compliance period shall not be more than one year nor less than six months.
5. An identification and description of specific records to be used to calculate emissions and track coating volume for the ACO Program and subsequent reporting. This shall include a detailed explanation as to how the records are to be used to demonstrate compliance with the averaging requirements of the ACO Program. Such records or electronic versions (if hardcopy originals are not generated) shall be made available to the Executive Officer upon request. These records shall include records from each of the following categories:
   (a) Product formulation records (including both coating and material VOCs):
      (1) Lab reports [including percent weight of non-volatiles, water, and exempts (if applicable); density of the coating; and raw laboratory data] of test methods conducted as specified in paragraph (e)(1) of the rule or
      (2) Product formulation data, including physical properties analyses, as applicable, with a VOC calculation demonstration; and
   (b) Production records consisting of batch tickets including the date of manufacture, batch weight and volume; and
   (c) Distribution records:
      (1) Customer lists or store distribution lists or both (as applicable) and

(2) Shipping manifests or bills of lading or both (as applicable); and

(d) Sales records consisting of point of sale receipts or invoices to local distributors or both, as applicable.

If the manufacturer requests to demonstrate compliance with the ACO Program by using records other than those specifically listed above, those records must be approved by the U.S. EPA, CARB, and the Executive Officer before an ACO Program can be approved. The Executive Officer may request additional records, as necessary, as a condition of approving the ACO Program or to verify compliance.

6. A statement, signed by a responsible party for the manufacturer, certifying that all information submitted is true and correct, and that records will be made available to the Executive Officer upon request.

(D) Reporting Requirements

1. For every single compliance period, the manufacturer shall submit to the Executive Officer a mid-term report listing all coatings subject to averaging during the first half of the compliance period, detailed analysis of the actual and allowable emissions at the end of the mid-term, and if actual emissions exceed allowable emissions an explanation as to how the manufacturer intends to achieve compliance by the end of the compliance period. The report shall be signed by the responsible party for the manufacturer, attesting that all information submitted is true and correct. The mid-term report shall be submitted within 45 days after the midway date of the compliance period. A manufacturer may request, in writing, an extension of up to 15 days for submittal of the mid-term report.

2. Within 60 days after the end of the compliance period or upon termination of the ACO Program, whichever is sooner, the manufacturer shall submit to the Executive Officer a final report, providing a detailed demonstration of the balance between the actual and allowable emissions for the compliance period, an update of any identification and description of specific records used by the manufacturer to verify compliance with the averaging requirement, and any other information requested by the Executive Officer to determine whether the manufacturer complied with the averaging requirements over the specified compliance period. The report shall be signed by the responsible party for the manufacturer,

attesting that all information submitted is true and correct, and that records will be made available to the Executive Officer upon request. A manufacturer may request, in writing, an extension of up to 30 days for submittal of the final report.

(E) Renewal of an ACO Program

An ACO Program automatically expires at the end of the compliance period. The manufacturer may request a renewal of the ACO Program by submitting a renewal request that shall include an updated ACO Program, meeting all applicable ACO Program requirements. The renewal request will be considered conditionally approved until the Executive Officer makes a final decision to deny or approve the renewal request based on a determination of whether the manufacturer is likely to comply with the averaging requirements. The Executive Officer shall base such determination on all available information, including but not limited to, the mid-term and final reports of the preceding compliance period. The Executive Officer shall make a decision to deny or approve a renewal request no later than 45 days from the date of the final report submittal, unless the manufacturer and the Executive Officer agree to an extension of time for the Executive Officer to take action on the renewal request.

(F) Modification of an ACO Program

A manufacturer may request a modification of the ACO Program at any time prior to the end of the compliance period. The Executive Officer shall take action to approve or disapprove the modification request no longer than 45 days from the date of its submittal. No modification of the compliance period shall be allowed. An ACO Program need not be modified to specify additional coatings to be averaged that are below the applicable VOC limits.

(G) Termination of an ACO Program

1. A manufacturer may terminate its ACO Program at any time by filing a written notification to the Executive Officer. The filing date shall be considered the effective date of the termination, and all other provisions of this rule including the VOC limits shall immediately thereafter apply. The manufacturer shall also submit a final report 60 days after the termination

date. Any exceedance of the actual emissions over the allowable emissions over the period that the ACO Program was in effect shall constitute a separate violation for each day of the entire compliance period.

2. The Executive Officer may terminate an ACO Program if any of the following circumstances occur:
   (a) The manufacturer violates the requirements of the approved ACO Program, and at the end of the compliance period, the actual emissions exceed the allowable emissions.
   (b) The manufacturer demonstrates a recurring pattern of violations and has consistently failed to take the necessary steps to correct those violations.

(H) Change in VOC Limits

If the VOC limits of a coating listed in the ACO Program are amended such that its effective date is less than one year from the date of adoption, the affected manufacturer may base its averaging on the prior limits of that coating until the end of the compliance period immediately following the date of adoption.

(I) Labeling

Each container of any coating that is included in an ACO Program, and that exceeds the applicable VOC limit in the Table of Standards shall display the following statement: "This product is subject to the averaging provisions of SCAQMD Rule 1113". A symbol specified by the Executive Officer may be used as a substitute.

(J) Violations

The exceedance of the allowable emissions, as defined in Appendix A, Section (A), at the end of any compliance period shall constitute a separate violation for each gallon of each coating product line that is over the VOC limit specified in the Table of Standards for each day of the compliance period. However, any violation of the requirements of the ACO Provision of this rule, which the violator can demonstrate, to the Executive Officer, did not cause or allow the emission of

an air contaminant and was not the result of negligent or knowing activity may be considered a minor violation (pursuant to District Rule 112).

(K) Sell-Through Provision

A coating that is included in an approved ACO Program that does not comply with the specified limit in the Table of Standards may be sold, supplied, offered for sale, or applied for up to three years after the end of the compliance period specified in the approved ACO Program. This section of Appendix A does not apply to any coating that does not display on the container either the statement: "This product is subject to architectural coatings averaging provisions of the SCAQMD Rule 1113" or a designated symbol specified by the Executive Officer of the SCAQMD.

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

(Adopted May 3, 2013)

RULE 1114 PETROLEUM REFINERY COKING OPERATIONS

(a) Purpose and Applicability

The purpose of this rule is to reduce emissions from atmospheric venting of coke drums. This rule applies to all petroleum refineries equipped with delayed coking units.

(b) Definitions

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

(1) COKE DRUM is a batch system pressure vessel in which petroleum coke is produced.

(2) DELAYED COKING UNIT is a petroleum refinery process unit in which high molecular weight petroleum derivatives are converted to lighter gaseous and liquid products and petroleum coke by means of thermal cracking in a series of coke drums. A delayed coking unit consists of the coke drums and ancillary equipment associated with a main fractionator.

(3) PETROLEUM REFINERY is a facility identified by the North American Industry Classification System Code 324110, Petroleum Refineries.

(4) TURNAROUND is a planned activity involving shutdown and startup of one or several process units for the purpose of performing periodic maintenance, repair or replacement of equipment, or installation of new equipment.

(c) Requirements

(1) Effective November 1, 2013, the owner or operator of a delayed coking unit shall depressurize each coke drum to less than two (2) pounds per square inch, gauge (psig) prior to venting it to atmosphere; or

(2) If unable to comply with the provisions of paragraph (c)(1), the owner or operator of a delayed coking unit shall comply with the following:

(A) At a facility with a single delayed coking unit, effective May 1, 2014, depressurize each coke drum prior to venting to atmosphere to less than five (5) psig until compliance with paragraph (c)(1) is achieved, which is required upon completion of the first unit turnaround after May 1, 2014 or by December 31, 2016, whichever is earlier.

(B) At a facility with more than one delayed coking unit:

(i) By November 1, 2013, submit to the Executive Officer:

(I) For approval, a baseline calculation using general engineering practices and substantiating records that identify the facility-wide average coke drum internal pressure at which atmospheric venting was initiated for all the coke drums during calendar year 2012, or

(II) A notification that the facility intends to depressurize each coke drum to less than five (5) psig until achieving compliance with paragraph (c)(1);

(ii) Effective May 1, 2014, until completion of the first turnaround at an affected delayed coking unit following May 1, 2014 or by December 31, 2016, whichever is earlier, either:

(I) Depressurize each coke drum prior to venting to atmosphere to a pressure not to exceed, when averaged over a 30 day period for all affected drums, 110% of the 2012 baseline submitted and approved pursuant to subclause (c)(2)(B)(i)(I), or

(II) Depressurize each coke drum to less than five (5) psig, pursuant to subclause (c)(2)(B)(i)(II); and,

(iii) Effective upon resuming operations at an affected delayed coking unit following its turnaround or January 1, 2017, whichever is earlier, depressurize each affected coke drum to less than 5 (five) psig prior to venting to atmosphere until compliance with paragraph (c)(1) is achieved within the next 24 months of the earlier trigger date.

(C) Submit to the Executive Officer any required permit applications pursuant to Regulation II for equipment and process modifications necessary to achieve compliance with subdivision (c) at least nine months prior to effective dates.

(d) Monitoring and Recording

Effective November 1, 2013, the owner or operator of a delayed coking unit shall:

(1) Monitor the coke drum pressure and record it continuously from feed introduction until atmospheric venting is initiated, using a device calibrated at least once annually according to manufacturer's specifications;

(2) Monitor and record continuously from feed introduction until atmospheric venting is initiated the following:

(A) Coke drum atmospheric vent valve position (open or closed) or, if unable to comply with subparagraph (d)(2)(A),

(B) Coke drum blowdown valve position or the temperature of the coke drum vent at a location downstream of the atmospheric vent valve, until achieving compliance with subparagraph (d)(2)(A), which is required upon completion of the first unit turnaround following November 1, 2013 or by December 31, 2016, whichever is earlier;

(3) Maintain the monitoring equipment required in paragraphs (d)(1) and (d)(2) in good operating condition except for periods of downtime due to calibration, maintenance or repair, which shall not exceed 96 hours per calendar year per delayed coking unit, and

(4) Manually record the coke drum pressure and the atmospheric vent valve position at five minute intervals covering a time period of no less than 15 minutes immediately prior to atmospheric venting during periods of downtime as specified in paragraph (d)(3).

Notwithstanding the effective date in subdivision (d), the owner or operator of a facility subject to paragraph (c)(2) shall comply with the requirements in this subdivision effective May 1, 2014.

(e) Notification

The owner or operator of a delayed coking unit shall notify the Executive Officer by telephone within 24 hours of any failure of the monitoring or recording equipment required by subdivision (d).

(f) Recordkeeping

Effective November 1, 2013, the owner or operator of a delayed coking unit shall maintain all operational and calibration records required by subdivision (d) for at

least five years and shall make such records available to the Executive Officer upon request. Notwithstanding the effective date in subdivision (f), the owner or operator of a facility subject to paragraph (c)(2) shall comply with the requirements in this subdivision effective May 1, 2014.

(g) Exemptions

Any coke drum subject to the provisions of this rule shall be exempt from the provisions of Rule 404.

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

(Adopted March 2, 1979)(Amended December 5, 1980)(Amended March 16, 1984)
(Amended March 2, 1990)(Amended August 2, 1991)
(Amended March 6, 1992)(Amended May 12, 1995)

RULE 1115. MOTOR VEHICLE ASSEMBLY LINE COATING OPERATIONS

(a) Purpose and Applicability

The purpose of Rule 1115 is to reduce volatile organic compound (VOC) emissions that result from coating operations conducted on motor vehicle assembly lines. This rule applies to all assembly line coating operations, conducted during the manufacturing of new motor vehicles.

(b) Definitions

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

1. APPLICATION LINE is that portion of a motor vehicle assembly production line which applies surface and other coatings to motor vehicle bodies, hoods, fenders, cargo boxes, doors, and grill opening panels.
2. ASSEMBLY LINE is 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.
3. BASECOAT is a pigmented topcoat which is the first topcoat applied as part of a multistage topcoat system.
4. BASECOAT/CLEARCOAT (BC/CC) is a topcoat consisting of a base coat portion and a clear coat portion.
5. 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.
6. CLEARCOAT is a topcoat which contains no pigments or only transparent pigments and which is the final topcoat applied as part of a multistage topcoat system.
7. COATING is a material which is applied to a surface in order to beautify and/or protect such surface.
8. ELECTROPHORETIC APPLIED PRIMER is an undercoat applied by dipping the component in a coating bath with an electrical potential difference between the component and the bath.
9. EXEMPT COMPOUNDS are any of the following compounds:

(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; and
-- 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 toxic, 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). Specifically, the District Board has established a policy to phase out chlorofluorocarbons (CFC) on or before 1997.

10. FINAL REPAIR is the final coating applied to correct topcoat imperfections prior to shipment.
11. METALLIC/IRIDESCENT TOPCOAT is a topcoat which contains iridescent particles, composed of either metal as metallic particles or silicon as mica particles, in excess of 5 g/L (0.042 lb/gal) as applied, where such particles are visible in the dry film.
12. MIDCOAT is a semi-transparent topcoat which is the middle topcoat applied as part of a three-stage topcoat system.
13. MOTOR VEHICLES are all passenger cars, light-duty trucks, medium-duty vehicles and heavy-duty vehicles as defined in Section 1900, Title 13, California Administrative Code.
14. MULTISTAGE TOPCOAT SYSTEM is any basecoat/clearcoat topcoat system or any three-stage topcoat system, manufactured as a system, and used as specified by the manufacturer.
15. OVERALL CONTROL EFFICIENCY is the product of capture and control efficiencies.
16. PRIMER is any or all coatings beneath the topcoat.
17. SPRAY PRIMER is any primer, except primer surfacer, that is applied by spraying.
18. PRIMER SURFACER is a primer coat applied over an electrophoretically applied primer.
19. SOLVENT CLEANING OPERATION is 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.
20. THREE-STAGE TOPCOAT SYSTEM is a topcoat system composed of a basecoat portion, a midcoat portion, and a transparent clearcoat portion.
21. TOPCOAT is the final coating applied for the purpose of establishing the final color and/or protective surface. This includes all multistage topcoat systems, metallic/iridescent topcoats, and final repair coatings.
22. TRANSFER EFFICIENCY is the ratio of the weight (or volume) of coating solids adhering to an object to the total weight (or volume) of coating solids used in the application process expressed as a percentage.
23. 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. VOC Content of Coatings and VOC Emission Limits

(A) A person shall not apply any electrophoretic primer, in any motor vehicle application line, which has a VOC content in excess of 145 grams per liter (1.2 lb/gal) of coating, less water and less exempt compounds.

(B) A person shall not apply any final repair coating, in any motor vehicle application line, which has a VOC content in excess of 580 grams per liter (4.8 lb/gal) of coating, less water and less exempt compounds.

(C) A person shall not apply any spray primer, primer surfacer and/or topcoat in any motor vehicle application

line that result in VOC emissions in excess of 1.80 kilograms per liter (15.0 lb/gal) of applied solids.

2. A person may comply with the requirements of paragraph (c)(1) by means of an Alternative Emission Control Plan pursuant to Rule 108.
3. Approved Emission Control System

   A person may comply with the provisions of paragraph (c)(1) by using an approved emission control system for reducing VOC emissions, consisting of collection and control devices which have been approved in writing by the Executive Officer, or designee. The approved emission control system shall reduce the VOC emissions resulting from the use of coatings by an equivalent or greater level to that which would have been achieved by the provisions of paragraph (c)(1).

   The required efficiency of an emission control system at which an equivalent or greater level of VOC reduction will be achieved shall be calculated by the following equation:

$$C.E. = \left[1 - \left\{ \frac{(VOC_{LWc})}{(VOC_{LWn\ Max})} \times \frac{1 - (VOC_{LWn\ Max}/D_{n\ Max})}{1 - (VOC_{LWc}/D_c)} \right\} \right] \times 100$$

Where: C.E. = Overall Control Efficiency, percent

VOC_{LWc} = VOC Limit of Rule 1115, less water and less exempt compounds, pursuant to subdivision (c).

$VOC_{LWn\ MAX}$ = Maximum VOC content of non-compliant coating used in conjunction with a control device, less water and exempt compounds.

$D_{n\ MAX}$ = Density of solvent, reducer, or thinner contained in the non-compliant coating.

D_c = Density of corresponding solvent, reducer, or thinner used in the compliant coating system = 880 g/L.

4. 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 solvent cleaning operations shall be carried out pursuant to Rule 1171 - Solvent Cleaning Operations.

(d) Rule 442 Applicability

Any motor vehicle application line exempt from all or a portion of this rule shall comply with the provisions of Rule 442.

(e) Methods of Analysis

1. Determination of VOC content

   The VOC content of materials subject to the provisions of the rule shall be determined by the following methods:

   (A) United States Environmental Protection Agency USEPA Reference Method 24, (Code of Federal Regulations (CFR) Title 40, Part 60, Appendix A). The exempt compound content shall be determined by SCAQMD Test Method 303 (Determination of Exempt Compounds) contained in the SCAQMD "Laboratory Methods of Analysis for Enforcement Samples" manual or;

   (B) SCAQMD Test 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 Compliance, Including Transfer Efficiency

Determination of compliance, including transfer efficiency, to verify compliance with subparagraph (c)(1)(C) shall be conducted as prescribed in EPA Protocol for Determining the Daily Volatile Organic Compound Emission Rate of Automobile and Light-Duty Truck Topcoat Operations, dated December 1988.

3. Determination of Efficiency of Emission Control System

(A) The capture efficiency of the emissions control system as specified in paragraph (c)(3) 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)(3) 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.

4. 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.

(f) Exemptions

1. The provisions of paragraph (c)(1) of this rule shall not apply to the following manufacturing operations:

(A) Other coating operations not associated with applying body primer, and topcoat coatings to exterior sheet metal and body.

(B) Use of:

(i) Wheel Topcoat Application

(ii) Antirust Coatings

(iii) Trunk Coatings

(iv) Interior Coatings

(v) Flexible Coatings

(vi) Sealers and Deadeners

(vii) Plastic Parts

(viii) Accent and Stripe Coatings

(g) Recordkeeping Daily Record of Coating and Solvent Usage

Daily records of coating and solvent usage shall be maintained pursuant to Rule 109.

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

(Adopted February 5, 1982)(Amended January 6, 1984)

RULE 1117. EMISSIONS OF OXIDES OF NITROGEN FROM GLASS MELTING FURNACES

(a) Definitions

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

1. Container Glass includes food and beverage type containers manufactured by pressing, blowing in molds, drawing, rolling, or casting.
2. Flat Glass means glass that is used in windows, windshields, plate glass, etc., and which is produced by the float, sheet, rolled, or plate glass process.
3. Pull is the term applied to the removal of glass from a glass melting furnace, generally expressed in tons.
4. Cullet is scrap glass which is added to the formulation being charged to a furnace.
5. Furnace is any fossil fuel fired glass melting furnace.
6. Furnace Rebuild is any change in furnace design configuration which requires a change in the Permit to Operate.
7. Idling is the operation of a furnace at less than 25 percent of the production capacity as stated on the Permit to Operate.
8. Start-up is that period of time during which a furnace is heated to operating temperature from a lower temperature.
9. Shutdown is that period of time during which a furnace is allowed to cool from operating temperature to a lower temperature.
10. Energy Recovery is the use of waste heat from a permit unit in another permit unit on the same premises so that at less than five percent of the total waste heat is recovered for useful purposes at the first stage of heat transfer.

(b) Requirements

1. After December 31, 1987, no person shall operate a furnace capable of discharging nitrogen oxides into the atmosphere unless such discharge of nitrogen oxides into the atmosphere is limited to no more than 5.5 pounds of nitrogen oxides per ton of glass pulled.
2. After December 31, 1992, no person shall operate a furnace capable of discharging nitrogen oxides into the atmosphere unless such discharge of nitrogen oxides into the atmosphere is limited to no more than 4.0 pounds of nitrogen oxides per ton of glass pulled.
3. The requirements of paragraphs (b)(1) and (b)(2) shall not apply to furnaces which comply with an alternative emissions control plan which satisfies all of the following requirements:

   (A) The maximum emission of any air contaminant in any 24 hour period shall not exceed the emission of such air contaminate if the furnaces complied with (b)(1) and (b)(2).

   (B) The furnaces are located within the same premises.

   (C) Prior to its implementation, the control plan shall be approved, in writing, by the Executive Officer.

   (D) The control plan shall be enforceable by the District and shall include methods acceptable to the Executive Officer for demonstrating compliance with the control plan on a daily basis.

   (E) Continuous NOx monitors shall be required for each furnace included in a control plan.

   (F) A modified alternative emission control plan shall be required prior to modification of any permit units subject to alternative emission control, or upon amendment of this rule. Such plan shall not include credit for those reductions required by amendments to this rule.

(G) The Permits to Operate for the equipment described in the control plan shall be surrendered and cancelled at the time new Permits to Construct or Operate are issued. Such new permits shall not be effective unless surrender of such existing permits has been made. If such new permits are denied, the existing permits surrendered pursuant to this section shall be reissued and restored to the same conditions which were applicable to the original permits prior to their surrender. The Executive Officer shall impose written conditions on any permits specifying emissions limits or other conditions as necessary.

(H) The person submitting the control plan shall maintain such records (for a period of two years) and submit such information on furnace operation, source tests, monitoring data, and other information as required by the Executive Officer to determine compliance with the control plan.

4. For installations using energy recovery, the NOx emission limit shall be based on the following equation:

```
Energy Recovery Based NOx Emission Limit = Emission Limit   x   A


Where:  Emission Limit = 1bs NOx/ton of glass pulled per paragraphs
        (b)(1) and (b)(2)


                 Energy Recovered (BTU/hr)
        A = 1 + ----------------------------
                 Furnace Heat Input (BTU/hr)
```

5. The energy recovered shall not be required for compliance with any other District Rule, used as an offset pursuant to Regulation XIII, banked as an emission reduction credit, nor used for alternative emission control pursuant to paragraph (b)(3).
6. Furnace heat input shall be based on the higher heating value of the fossil fuel fired and shall include the heat input due to electric boost.

(c) Compliance Determination

1. For the purposes of this rule, nitrogen oxides shall be calculated as NO_2 on a dry basis, or by an alternative method requested by the operator and approved by the Executive Officer.
2. All emission determinations shall be made in the as-found operating condition, except no compliance determination shall be made during start-up, shutdown, or under breakdown conditions.
3. The averaging time for measurement of nitrogen oxides for compliance determination shall be 3 hours, except if an operator installs and maintains a continuous NOx monitor in accordance with conditions set forth by the Executive Officer, the averaging time may be extended to 24 hours.
4. The following expression shall be used to convert uncorrected observed volume in parts per million of NOx to pounds of NOx per ton of glass pulled at standard conditions of 68 degrees F and 29.92 inches of mercury:

$$\frac{(\text{PPMv NOx})(46\ \text{grams/mole})(1.56 \times 10^{-7})(\text{SDCFM})}{\text{Ton/hour of Glass Pulled}} = \frac{\text{Lbs NOx}}{\text{Ton of glass pulled}}$$

(d) Exemptions

The provisions of this rule shall not apply to:

1. Furnaces which are limited by Permit to Operate to 15 lbs/hour of NOx or less.
2. Glass remelt facilities using exclusively glass cullet, marbles, chips, or similar feedstock in lieu of basic glass-making raw materials.

3. Furnaces used in the melting of glass for the production of glass tableware exclusively.
4. Flat glass melting furnaces.
5. Furnaces used in the melting of glass for the production of fiberglass exclusively.
6. Idling furnaces.

(e) Effective Date

Any furnace rebuilt after July 1, 1983 shall comply with the provisions of paragraph (b)(1) of this rule upon commencement of operation. All other furnaces shall comply by December 31, 1987.

Any furnace rebuilt after December 31, 1987 shall comply with the provisions of paragraph (b)(2) of this rule upon commencement of operation. All other furnaces shall comply by December 31, 1992.

(Adopted February 13, 1998)(Amended November 4, 2005)

RULE 1118. CONTROL OF EMISSIONS FROM REFINERY FLARES

(a) Purpose and Applicability

The purpose of Rule 1118 is to monitor and record data on refinery and related flaring operations, and to control and minimize flaring and flare related emissions. The provisions of this rule are not intended to preempt any petroleum refinery, sulfur recovery plant and hydrogen production plant operations and practices with regard to safety. This rule applies to all flares used at petroleum refineries, sulfur recovery plants and hydrogen production plants.

(b) Definitions

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

(1) CLEAN SERVICE FLARE is a flare that is designed and configured by installation to combust only natural gas, hydrogen gas and/or liquefied petroleum gas, or any other gas(es) with a fixed composition vented from specific equipment which has been determined to be equivalent and approved in writing by the Executive Officer.

(2) EMERGENCY is a condition beyond the reasonable control of the owner or operator of a flare requiring immediate corrective action to restore normal and safe operation, which is caused by a sudden, infrequent and not reasonably preventable equipment failure, natural disaster, act of war or terrorism or external power curtailment, excluding power curtailment due to an interruptible power service agreement from a utility. For the purpose of this rule, a repetitive event from the same equipment caused by poor maintenance, or a condition caused by operator error that results in a flare event shall not be deemed an emergency.

(3) EMERGENCY SERVICE FLARE is a flare other than clean service flare that is designed and configured by installation to combust only vent gases as a result of any situation arising from sudden and unforeseeable events beyond the reasonable control of the owner or operator of the gas flare which require immediate corrective action to restore normal and safe operation including emergency process upset condition, equipment malfunction or breakdown, electrical power failure, steam failure, cooling

air or water failure, instrument air failure, reflux failure, heat exchanger tube failure, loss of heat, excess heat, fire and explosion.

(4) ESSENTIAL OPERATIONAL NEED is an activity determined by the Executive Officer to meet one of the following:

(A) Temporary fuel gas system imbalance due to:

(i) Inability to accept gas compliant with Rule 431.1 by an electric generation unit at the facility that produces electricity to be used in a state grid system, or

(ii) Inability to accept gas compliant with Rule 431.1 by a third party that has a contractual gas purchase agreement with the facility, or

(iii) The sudden shutdown of a refinery fuel gas combustion device for reasons other than poor maintenance or operator error;

(B) Relief valve leakage due to malfunction;

(C) Venting of streams that cannot be recovered due to incompatibility with recovery system equipment or with refinery fuel gas systems, including supplemental natural gas or other gas compliant with Rule 431.1 that is used for the purpose of maintaining the higher heating value of the vent gas above 300 British Thermal Units per standard cubic foot. Such streams include inert gases, oxygen, gases with low or high molecular weights outside the design operating range of the recovery system equipment and gases with low or high higher heating values that could render refinery fuel gas systems and/or combustion devices unsafe;

(D) Venting of clean service streams to a clean service flare or a general service flare;

(E) Intermittent minor venting from:

(i) Sight glasses;

(ii) Compressor bottles;

(iii) Sampling systems; or

(iv) Pump or compressor vents; or

(F) An emergency situation in the process operation resulting from the vessel operating pressure rising above pressure relief devices' set points, or maximum vessel operating temperature set point.

(5) FLARE is a combustion device that uses an open flame to burn combustible gases with combustion air provided by uncontrolled ambient air around the flame. This consists of both ground and elevated flares. When used as a verb means the combustion of vent gases in a flare device.

(6) FLARE EVENT is any intentional or unintentional combustion of vent gas in a flare. The flare event ends when the flow velocity drops below 0.12 feet per second or when the owner or operator can demonstrate that no more vent gas was combusted based upon the monitoring records of the flare water seal level and/or other parameters as approved by the Executive Officer in the Flare Monitoring and Recording Plan. For a flare event that continues for more than 24 hours, each day of venting of gases shall constitute a flare event.

(7) FLARE GAS RECOVERY SYSTEM is a system comprised of compressors, pumps, heat exchangers, knock-out pots and water seals, installed to prevent or minimize the combustion of vent gas in a flare.

(8) FLARE MINIMIZATION PLAN is a document intended to meet the requirements of subdivision (e).

(9) FLARE MONITORING SYSTEM is the monitoring and recording equipment used for the determination of flare operating parameters, including higher heating value, total sulfur concentration, standard volumetric flow rate, and/or on/off flow indication.

(10) GENERAL SERVICE FLARE is a flare that is not defined in paragraphs (b)(1) or (b)(3) that is designed and configured by installation to combust vent gases as a result of any situation including, but not limited to, relief of excess operating pressures, tank vapor displacement, start-ups, shutdowns, process unit turnarounds and blowdowns, and scheduled and unscheduled maintenance and clean up.

(11) HYDROGEN PRODUCTION PLANT is a facility that produces hydrogen by steam hydrocarbon reforming, partial oxidation of hydrocarbons, or other processes, using refinery fuel gas, process gas or natural gas, and which supplies hydrogen for petroleum refinery operations.

(12) NATURAL GAS is 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.

(13) NOTICE OF SULFUR DIOXIDE EXCEEDANCE is a notice issued by the Executive Officer to the owner or operator when the petroleum refinery has exceeded a performance target of this rule.

(14) PETROLEUM REFINERY is a facility that processes petroleum, as defined in the Standard Industrial Classification Manual as Industry No. 2911, Petroleum Refining. For the purpose of this rule, all portions of the petroleum refining operation, including those at non-contiguous locations operating flares, shall be considered as one petroleum refinery.

(15) PILOT is an auxiliary burner used to ignite the vent gas routed to a flare.

(16) PURGE GAS is a continuous gas stream introduced into a flare header, flare stack and /or flare tip for the purpose of maintaining a positive flow that prevents the formation of an explosive mixture due to ambient air ingress.

(17) REPRESENTATIVE SAMPLE is a sample of vent gas collected from the location as approved in the Flare Monitoring and Recording Plan and analyzed utilizing test methods specified in subdivision (j).

(18) SAMPLING FLARE EVENT is any flare event for a specific flare exceeding either a flow rate of 330 standard cubic feet per minute continuously for a period greater than 15 minutes, or any other flare event, as requested by the petroleum refinery and approved in writing by the Executive Officer. Sampling flare events that occur within 15 minutes of each other are considered a single event if the facility can demonstrate to the satisfaction of the Executive Officer that the events had a common cause and the release of vent gas originated from the same process unit.

(19) SHUTDOWN is the procedure by which the operation of a process unit or piece of equipment is stopped due to the end of a production run, or for the purpose of performing maintenance, repair and replacement of equipment. Stoppage caused by frequent breakdown due to poor maintenance or operator error shall not be deemed a shutdown.

(20) SPECIFIC CAUSE ANALYSIS is a process used by a facility subject to this rule to investigate the cause of a flare event, identify corrective measures and prevent recurrence of a similar event.

(21) STARTUP is the procedure by which a process unit or piece of equipment achieves normal operational status, as indicated by such parameters as temperature, pressure, feed rate and product quality.

(22) SULFUR RECOVERY PLANT is a facility that recovers elemental sulfur or sulfur compounds from sour gases and/or sour water generated by petroleum refineries.

(23) TURNAROUND is a planned activity involving shutdown and startup of one or several process units for the purpose of performing periodic maintenance, repair, replacement of equipment or installation of new equipment.

(24) VENT GAS is any gas generated at a facility subject to this rule that is routed to a flare, excluding assisting air or steam, which are injected in the flare combustion zone or flare stack via separate lines.

(25) VOLATILE ORGANIC COMPOUNDS (VOC) is as defined in Rule 102.

(c) Requirements

The owner or operator of a petroleum refinery, sulfur recovery plant or hydrogen production plant subject to this rule shall:

(1) Effective January 1, 2006:

(A) Maintain a pilot flame present at all times a flare is operational.

(B) Operate all flares in a smokeless manner with no visible emissions except for periods not to exceed a total of five minutes during two consecutive hours, as determined by the test method in paragraph (j)(3).

(C) Conduct an annual acoustical or temperature leak survey of all pressure relief devices connected directly to a flare and repair leaking pressure relief devices no later than the next turnaround. The survey shall be conducted no earlier than 90 days prior to the scheduled process unit turnaround.

(D) Conduct a Specific Cause Analysis for any flare event, excluding planned shutdown, planned startup and turnarounds, with emissions exceeding either:

(i) 100 pounds of VOC;

(ii) 500 pounds of sulfur dioxide;

(iii) 500,000 standard cubic feet of vent gas combusted,

(E) Conduct an analysis and determine the relative cause of any other flare events where more than 5,000 standard cubic feet of vent gas are combusted. When it is not feasible to determine relative cause, state the reason why it was not feasible to make the determination.

(2) Effective September 1, 2006, submit the following information to the Executive Officer:

(A) Detailed process flow diagrams of all upstream equipment and process units venting to each flare and a complete description and technical specifications for each flare system components such as flares, associated knock-out pots, surge drums, water seals and flare gas recovery systems, and an audit of the vent gas recovery capacity of each flare system, the available storage for excess vent gases and the scrubbing capacity available for vent gases, including any limitations associated with scrubbing vent gases for use as a fuel; and

(B) A description of the equipment, processes and procedures installed or implemented within the last five years to reduce flaring; and

(C) A descriptions of any equipment, processes or procedures the owner or operator plans to install or implement to eliminate or reduce flaring. The description shall specify the scheduled year of installation or implementation.

(3) Effective January 1, 2007, submit to the Executive Officer an evaluation of options to reduce flaring during planned shutdowns, startups and turnarounds, including, but not limited to slower vessel depressurization, storing vent gases.

(4) Effective January 1, 2007, operate all flares in such a manner that minimizes all flaring and that no vent gas is combusted except during emergencies, shutdowns, startups, turnarounds or essential operational needs. Notwithstanding the effective date above, for the owner or operator of a facility subject to this rule that must install flare gas recovery and treatment system(s) to comply with the requirements of this paragraph, the effective date for a flare directly associated with the proposed flare gas recovery and treatment system shall be January 1, 2009, provided the owner or operator submits a complete application to construct and operate a flare gas recovery and treatment system(s) by July 1, 2006. For a facility installing flare gas treatment and recovery system(s) for more than two flares, the owner or operator may request an extension of the compliance date specified in this paragraph for the flare gas recovery and treatment system serving the additional flares to no later than January 1, 2010. The Executive Officer may grant an extension

provided that the owner or operator submits a request in writing to the Executive Officer prior to January 1, 2007, and the facility demonstrates that an extension is necessary due to operational needs.

(5) Effective January 1, 2009, prevent the combustion in any flare of vent gas with a hydrogen sulfide concentration in excess of 160 ppm, averaged over three hours, excluding any vent gas resulting from an emergency, shutdown, startup, process upset or relief valve leakage. Notwithstanding the effective date above, for the owner or operator of a facility installing flare gas treatment and recovery system(s) for more than two flares to comply with the requirements of paragraph (c)(4), the owner or operator may request an extension of the compliance date specified in this paragraph for the flare gas recovery and treatment system serving the additional flares to no later than January 1, 2010. The Executive Officer may grant an extension provided that the owner or operator submits a request in writing to the Executive Officer prior to January 1, 2007, and the facility demonstrates that an extension is necessary due to operational needs.

(d) Performance Targets

(1) The owner or operator of a petroleum refinery subject to this rule shall minimize flare emissions and meet the following performance targets:

(A) Beginning with calendar year 2006, minimize sulfur dioxide emissions from flares to less than 1.5 tons per million barrels of crude processing capacity, calculated as an average over one calendar year;

(B) Beginning with calendar year 2008, minimize sulfur dioxide emissions from flares to less than 1 ton per million barrels of crude processing capacity, calculated as an average over one calendar year;

(C) Beginning with calendar year 2010, minimize sulfur dioxide emissions from flares to less than 0.7 tons per million barrels of crude processing capacity, calculated as an average over one calendar year;

(D) Beginning with calendar year 2012, minimize sulfur dioxide emissions from flares to less than 0.5 tons per million barrels of

crude processing capacity, calculated as an average over one calendar year.

Compliance with the performance targets above shall be determined at the end of each calendar year based on the facility's annual flare sulfur dioxide emissions normalized over the crude oil processing capacity in calendar year 2004.

(2) In the event the petroleum refinery specific performance targets of paragraph (d)(1) are exceeded for any calendar year, the Executive Officer may issue a Notice of Sulfur Dioxide Exceedance that shall become a part of the refinery compliance record.

(3) In the event the petroleum refinery specific performance targets of paragraph (d)(1) are exceeded for any calendar year, the owner or operator of the petroleum refinery shall:

(A) Submit a Flare Minimization Plan pursuant to subdivision (e), and

(B) Pay the District mitigation fees, within 90 days following the end of a calendar year for which the performance target was exceeded, according to the following schedule:

(i) If excess emissions are no more than ten percent of the petroleum refinery specific performance target, $25,000 per ton for all sulfur dioxide emission(s) in excess of the applicable performance target, or

(ii) If excess emissions are greater than ten percent but no more than twenty percent of the petroleum refinery specific performance target, $50,000 per ton of all sulfur dioxide emission(s) in excess of the applicable performance target, or

(iii) If excess emissions are greater than twenty percent of the petroleum refinery specific performance target, $100,000 per ton of all sulfur dioxide emission(s) in excess of the applicable performance target, and

(iv) Notwithstanding the mitigation fee schedule of this subparagraph, the mitigation fee for a petroleum refinery for a calendar year will not exceed $4,000,000.

(e) Flare Minimization Plan

(1) The owner or operator of a petroleum refinery exceeding the performance targets in paragraph (d)(1) shall submit, no later than 90 days from the end of a calendar year with emissions exceeding the annual performance target, a complete Flare Minimization Plan for approval by the Executive Officer. This plan shall constitute a plan pursuant to Rule 221 and fees shall be assessed pursuant to Rule 306. The plan application shall list all actions to be taken by the petroleum refinery to meet the performance targets in subdivision (d), including the following:

(A) A complete description and technical specifications for each flare and associated knock-out pots, surge drums, water seals and flare gas recovery systems;

(B) Detailed process flow diagrams of all upstream equipment and process units venting to each flare, identifying the type and location of all control equipment;

(C) Refinery policies and procedures to be implemented and any equipment improvements to minimize flaring and flare emissions and comply with the performance targets of paragraph (d)(1) for:

(i) Planned turnarounds and other scheduled maintenance, based on an evaluation of these activities during the previous five years;

(ii) Essential operational needs and the technical reason for which the vent gas cannot be prevented from being flared during each specific situation, based on supporting documentation on flare gas recovery systems, excess gas storage and gas treating capacity available for each flare; and

(iii) Emergencies, including procedures that will be used to prevent recurring equipment breakdowns and process upset, based on an evaluation of the adequacy of maintenance schedules for equipment, process and control instrumentation.

(D) Any flare gas recovery equipment and treatment system(s) to be installed to comply with the performance targets of paragraph (d)(1).

(2) The Executive Officer will make the Flare Minimization Plans available for public review for a period of 60 days and respond to comments

received prior to plan approval. The Executive Officer will approve a plan upon determining that it meets the requirements of subdivision (e), or notify the owner or operator in writing that the plan is deficient and specify the required corrective action. If the owner or operator fails to submit an amendment within 45 days to correct the deficiency, the Executive Officer will deny the Flare Minimization Plan. The facility will be deemed in violation of this rule upon the Executive Officer's denial of the Flare Minimization Plan.

(3) The owner or operator of a petroleum refinery having an existing approved Flare Minimization Plan shall, no later than 90 days from the end of a calendar year, submit for the approval of the Executive Officer a revised Flare Minimization Plan, subject to the provisions of paragraphs (e)(1) and (e)(2), in the event the annual performance target for that calendar year is exceeded.

(4) The owner and operator of a petroleum refinery shall comply with all provisions of an approved Flare Minimization Plan. Violation of any of the terms of the plan is a violation of this rule.

(f) Flare Monitoring and Recording Plan Requirements

(1) The owner or operator of an existing petroleum refinery, sulfur recovery plant or hydrogen production plant, as of November 4, 2005, shall:

(A) On or before June 30, 2006, submit a Revised Flare Monitoring and Recording Plan, complete with an application and appropriate fees, for each facility to the Executive Officer for approval. This plan shall constitute a plan pursuant to Rule 221 and fees shall be assessed pursuant to Rule 306. Each Flare Monitoring and Recording Plan shall contain the information described in paragraph (f)(3) of this rule.

(B) Comply with the most current Flare Monitoring and Recording Plan approved by the Executive Officer and in effect prior to November 4, 2005. The Executive Officer will amend the plan to include Rule 1118 as adopted on February 13, 1998, to become part of the plan and will issue the amended plan within 30 days of November 4, 2005. The amended plan shall remain in effect until the Revised Flare Monitoring and Recording Plan, submitted

pursuant to subparagraph (f)(1)(A) is approved by the Executive Officer.

(C) The owner or operator of a petroleum refinery, sulfur plant or hydrogen plant shall comply with all provisions of an approved Flare Monitoring and Recording Plan. Violation of any of the terms of the plan is a violation of this rule.

(2) The owner or operator of a new or an existing non-operating petroleum refinery, sulfur recovery plant or hydrogen production plant starting or restarting operations on or after February 13, 1998 shall:

(A) Provide the Executive Officer a written notice of the date of start-up no later than seven (7) days prior to starting or commencing operations.

(B) No later than 180 days prior to the initial startup or resumption of operations, submit a complete application and appropriate fees for a Flare Monitoring and Recording Plan to the Executive Officer for approval. This plan shall constitute a plan pursuant to Rule 221 and fees shall be assessed pursuant to Rule 306. Each Flare Monitoring and Recording Plan shall contain the information described in paragraph (f)(3) of this rule.

(3) Each Flare Monitoring and Recording Plan or Revised Flare Monitoring and Recording Plan shall include, at a minimum, the following:

(A) A facility plot plan showing the location of each flare in relation to the general plant layout.

(B) Type of flare service, as defined in subdivision (b), and information regarding design capacity, operation and maintenance for each flare.

(C) The following information regarding pilot and purge gas for each flare:

(i) Type(s) of gas used;

(ii) Actual set operating flow rate in standard cubic feet per minute;

(iii) Maximum total sulfur concentration expected for each type of gas used; and

(iv) Average higher (gross) heating value expected for each type of gas used.

(D) Drawing(s), preferably to scale with dimensions, and an as built process flow diagram of the flare(s) identifying major components, such as flare header, flare stack, flare tip(s) or burner(s), purge gas system, pilot gas system, ignition system, assist system, water seal, knockout drum and molecular seal.

(E) A representative flow diagram showing the interconnections of the flare system(s) with vapor recovery system(s), process units and other equipment as applicable.

(F) A complete description of the assist system process control, flame detection system and pilot ignition system.

(G) A complete description of the gas flaring process for an integrated gas flaring system which describes the method of operation of the flares (e.g. sequential, etc.).

(H) A complete description of the vapor recovery system(s) which have interconnection to a flare, such as compressor description(s), design capacities of each compressor and the vapor recovery system, and the method currently used to determine and record the amount of vapors recovered.

(I) Drawing(s) with dimensions, preferably to scale, showing the following information for proposed vent gas:

(i) Sampling locations; and,

(ii) Flow meter device, on/off flow indicators, higher heating value analyzer and total sulfur analyzer locations and the method used to determine the location.

(J) A detailed description of manufacturer's specifications, including but not limited to, make, model, type, range, precision, accuracy, calibration, maintenance, a quality assurance procedure and any other specifications and information referenced in Attachment A for all existing and proposed flow metering devices, on/off flow indicating devices, higher heating value and total sulfur analyzers for vent gas.

(K) A complete description and the data used to determine and to set the actuating and deactuating and the method to be used for verification of each setting for each on/off flow indicator.

(L) A complete description of proposed analytical and sampling methods or estimation methods, if applicable, for determining

higher (gross) heating value and total sulfur concentration of the flare vent gas.

(M) A complete description of the proposed data recording, collection and management and any other specifications and information referenced in Attachment A for each flare monitoring system.

(N) A complete description of proposed method to determine, monitor and record total volume, higher heating value and total sulfur concentration of gases vented to a flare for each flare event pursuant to the requirements of this rule.

(O) A schedule for the installation and operation of each flare monitoring system.

(P) A complete description of any proposed alternative criteria to determine a sampling flare event for each specific flare, if any, and detailed information used for the basis of establishing such criteria.

(Q) A request to use the alternative sampling program pursuant to subparagraph (g)(4)(C), if applicable, with a complete description of proposed Quality Assurance/Quality Control procedures to be used in a test program to determine the correlation between the results from the alternative sampling program and the testing and monitoring methods specified in subdivision (j).

(g) Operation Monitoring and Recording Requirements

The owner or operator of a flare subject to this rule shall comply with the following:

(1) On or before six (6) months after approval of the Flare Monitoring and Recording Plan or Revised Flare Monitoring and Recording Plan, , start monitoring and recording in accordance with subdivision (g), in accordance with the approved Flare Monitoring and Recording Plan or Revised Flare Monitoring and Recording Plan.

(2) Notwithstanding the provisions in Rule 430 - Breakdown Provisions and Rule 2004 - Requirements, the Operation Monitoring and Recording Requirements of this rule shall be applicable during all periods including breakdowns except as specified in subparagraph (g)(5)(A).

(3) Perform monitoring and recording of the operating parameters, as applicable, according to the monitoring and recording requirements and

frequency shown in Table 1 (including footnotes) below, except as specified in paragraph (g)(4) and (g)(5).

TABLE 1

Effective until June 30, 2007

TYPE OF FLARE	OPERATING PARAMETER	MONITORING AND RECORDING
Clean Service	Gas Flow[1]	Measured and Recorded[2] Continuously with Flow Meter(s) and/or On/Off Flow Indicator(s)
	Gas Higher Heating Value [3]	Calculated or Representative Sample for Each Flare Event[4]
	Total Sulfur Concentration[5]	Calculated or Representative Sample for Each Flare Event
Emergency Service	Gas Flow[1]	Measured and Recorded[2] Continuously with Flow Meter(s) and/or On/Off Flow Indicator(s)
	Gas Higher Heating Value	One Daily Representative Sample for a Flare Event and a Representative Sample for Each Sampling Flare Event[4]; or Continuously Measured and Recorded with a Higher Heating Value Analyzer
	Total Sulfur Concentration[5]	One Daily Representative Sample for a Flare Event and a Representative Sample for Each Sampling Flare Event[4]; or Semi-Continuously Measured and Recorded with a Total Sulfur Analyzer
General Service	Gas Flow[1]	Measured and Recorded[2] Continuously with Flow Meter(s) with or without on/off flow indicator(s)
	Gas Higher Heating Value [3]	One Daily Representative Sample for a Flare Event and a Representative Sample for Each Sampling Flare Event[4]; or Continuously Measured and Recorded with a Higher Heating Value Analyzer

TYPE OF FLARE	OPERATING PARAMETER	MONITORING AND RECORDING
General Service	Total Sulfur Concentration[5]	One Daily Representative Sample for a Flare Event and a Representative Sample for Each Sampling Flare Event[4]; or Semi-Continuously Measured and Recorded with a Total Sulfur Analyzer

1. Standard Cubic Feet per Minute.
2. All flow meters, flow indicators and recorders shall meet or exceed the minimum specifications listed below upon rule adoption or those in Attachment A by January 1, 2007:
   - (i) Velocity Range: 1-250 ft/sec
   - (ii) Repeatability: ± 1% of reading over the velocity range
   - (iii) Accuracy: ± 5% of reading over the velocity range
   - (iv) Installation: Applicable AGA, ANSI, API, or equivalent standard; hot tap capability.
   - (v) Flow Rate Determination Applicable AGA, ANSI, API, or equivalent standard.
3. Higher (Gross) Heating Value in British Thermal Units per Standard Cubic Foot.
4. Sample shall be taken within 30 minutes of the start of each flare event. Only one representative sample is required each day for flare events that are not sampling flare events. A representative sample collected for a sampling flare event on that day may be used to satisfy this requirement. Sampling flare events that occur within 15 minutes of each other are considered a single event if the facility can demonstrate to the satisfaction of the Executive Officer that the events had a common cause and the release of vent gas originated from the same process unit. For flare events lasting 15 minutes or less, no representative sample is required and emission shall be calculated according to the procedure in Attachment B Section 1 Note (2). A sample shall not be required if the operator demonstrates vent gas is not routed to a flare based on verifiable records of flare water seal level and/or other parameters as approved by the Executive Officer in the Flare Monitoring and Recording Plan or the Revised Flare Monitoring and Recording Plan. The requirement for daily representative sample shall be effective January 1, 2006.
5. Total Sulfur as SO_2, ppm.

Effective July 1, 2007

TYPE OF FLARE	OPERATING PARAMETER	MONITORING AND RECORDING
Clean Service	Gas Flow[1]	Measured and Recorded[2] Continuously with Flow Meter(s) and/or On/Off Flow Indicator(s)
	Gas Higher Heating Value [3]	Calculated or Representative Sample for Each Flare Event
	Total Sulfur Concentration[4]	Calculated or Representative Sample for Each Flare Event

TYPE OF FLARE	OPERATING PARAMETER	MONITORING AND RECORDING
Emergency Service	Gas Flow[1]	Measured and Recorded[2] Continuously with Flow Meter(s) and/or On/Off Flow Indicator(s)
	Gas Higher Heating Value [3]	Continuously Measured and Recorded with a Higher Heating Value Analyzer
	Total Sulfur Concentration[4]	Semi-Continuously Measured and Recorded with a Total Sulfur Analyzer
General Service	Gas Flow[1]	Measured and Recorded[2] Continuously with Flow Meter(s) with or without on/off flow indicator(s)
	Gas Higher Heating Value [3]	Continuously Measured and Recorded with a Higher Heating Value Analyzer
	Total Sulfur Concentration[4]	Semi-Continuously Measured and Recorded with a Total Sulfur Analyzer

1. Standard Cubic Feet per Minute.
2. All flow meters, flow indicators and recorders shall meet or exceed the minimum specifications in Attachment A.
3. Higher (Gross) Heating Value in British Thermal Units per Standard Cubic Foot.
4. Total Sulfur as SO_2, ppm.

(4) Alternative Flare Vent Gas Sampling

(A) In cases where sampling of vent gas is exempted pursuant to paragraph (k)(1), the owner or operator of a gas flare shall identify for each flare event, the cause of event, the process system(s) involved, date and time event started and duration and any other information related to the type of vent gas (e.g. total sulfur concentration) which is necessary to calculate flare emissions using the guidelines in Appendix B for substituted data. The estimated emissions, subject to approval by the Executive Officer as representative of emissions from that flare event, shall be reported and submitted with the quarterly report as specified in paragraph (i)(4).

(B) The owner or operator of a flare may comply with the vent gas sampling requirements of paragraph (g)(3) based on alternative criteria for determining a sampling flare event for each specific flare, provided that such alternative criteria are submitted as part of the Flare Monitoring and Recording Plan in subparagraph (f)(3)(P), and are approved in writing by the Executive Officer.

(C) During the interim period, which is after the approval of the Flare Monitoring and Recording Plan or Revised Flare Monitoring and Recording Plan and until in compliance with paragraph (g)(1), an alternative sampling program for sampling flare events for each flare may be used provided the following requirements are met:

(i) A request to use an alternative sampling program has been submitted by the flare owner or operator as part of the Flare Monitoring and Recording Plan pursuant to subparagraph (f)(3)(Q) and approved as equivalent by the Executive Officer. The Executive Officer must make a finding, in the case of an existing facility, that compliance with subparagraph (f)(1)(B) is not feasible.

(ii) The vent gas(es) to each flare shall be sampled and analyzed, if applicable, for total sulfur and higher (gross) heating value in accordance with methods specified in subdivision (j), once a day. If there is a sampling flare event in any day, the sampling and analysis shall also be conducted during such event in addition to the daily sampling requirement.

(iii) In addition to the samples collected and analyzed pursuant to the requirements in clause (g)(4)(C)(ii), the vent gas(es) to each flare shall be sampled and analyzed in accordance with Table 1, as follows:

(I) Once a day during each sampling flare event other than the flare event specified in clause (g)(4)(C)(ii), if such a sampling event occurs during that day.(II) For all sampling flare events that are the result of any process unit shutdown.

(iv) The vent gas(es) to each flare shall be sampled and analyzed for all other sampling flare events to measure

hydrogen sulfide concentrations in the vent gas using a colorimetric method or other methods as specified in the Flare Monitoring and Recording Plan pursuant to subparagraph (f)(3)(Q) and as approved in writing by the Executive Officer.

(D) After the interim period of monitoring and recording pursuant to subparagraph (g)(4)(C), the owner or operator of a flare may, based on the monitoring data, request a change in the vent gas sampling requirement of paragraph (g)(3) and/or propose an equivalent alternative criteria for determining a sampling flare event for each specific flare, provided that the owner or operator of the flare submits an application for the modification to the Flare Monitoring and Recording Plan and can demonstrate, and obtain written approval of the Executive Officer that an alternative vent gas sampling and/or an alternative criteria for determining a sampling flare event for each specific flare is equivalent to the sampling requirement of paragraph (g)(3) and is adequate to determine the quality of vent gas(es) and to calculate emissions from all such flare events.

(E) After the interim period of monitoring and recording pursuant to subparagraph(g)(4)(C), the Executive Officer may revise any alternative criteria for determining a sampling flare event for each specific flare or any alternative vent gas sampling which have been previously proposed by the owner or operator of a flare and approved by the Executive Officer, if the Executive Officer determines that the alternative(s) is not adequate based on the monitoring data or other information to determine the quality of vent gas(es) and to calculate emissions from all such flare events. The owner or operator of the flare shall use the revised criteria for determining a sampling flare event or vent gas sampling to monitor and record flare events no later than 30 days after written notification by the Executive Officer.

(5) Flare Monitoring System

(A) Maintain any flare monitoring system, used to ensure compliance with paragraph (g)(3) of this rule, in good operating condition at

all times when the flare that it serves is operational, except when out of service due to:

(i) Breakdowns and unplanned system maintenance, which shall not exceed 96 hours, cumulatively, per quarter for each reporting period; or,

(ii) Planned maintenance, which shall not exceed 14 days per 18 month period commencing the start of flare monitoring and recording, provided that a written notification detailing the reason for maintenance and methods that will be used during the maintenance period to determine emissions associated with flare events is provided to the Executive Officer prior to, or within 24 hours of, removal of the monitoring system from service.

(B) A flare monitoring system may be used to measure and record the operating parameters required in paragraph (g)(3) of this rule for more than one flare provided that:

(i) All the gases being measured and recorded are delivered to the flare(s) for combustion; and,

(ii) Effective July 1, 2007, if the flare monitoring system is used to measure and record the operating parameters for emergency service flares, as well as general service flares, the flare monitoring system shall consist of a continuous vent gas flow meter, a continuous higher heating value analyzer, a total sulfur analyzer and recorder that meet the requirements specified in Attachment A.

(6) Monitor the presence of a pilot flame using a thermocouple or any other equivalent device approved by the Executive Officer to detect the presence of a flame.

(7) Effective July 1, 2006, monitor all flares for visible emissions using color video monitors with date and time stamp, capable of recording a digital image of the flare and flame at a rate of no less than one frame per minute.

(8) Effective January 1, 2007, for all emergency and general service flares:

(A) Install each flow meter in a manner and at a location that would allow for accurate measurements of the total volume of vent gas to each flare. If the flow meter cannot be placed in the location that would allow for accurate measurement due to physical constraints,

the operator shall retrofit or equip the existing flow meters with totalizing capability to indicate the true net volume of gas flow to each flare.

(B) Install an automated sample collection system at each flare, capable to alert personnel that a sample is being collected following the start of a sampling flare event, unless total sulfur is monitored with a certified analyzer approved by the Executive Officer.

(C) Monitor and record the pilot gas and purge gas flow to each flare using a flow meter or equivalent device approved by the Executive Officer.

(h) Recordkeeping Requirements

The owner or operator of a flare shall maintain records in a manner approved by the Executive Officer for all the information required to be monitored and make such records available to the Executive Officer upon request:

(1) For a period of 90 days for the information required under paragraph (g)(7); and

(2) For a period of five (5) years for all the information required under paragraphs (g)(3), (g)(4), (g)(5), (g)(6) and subparagraph (g)(8)(C) as applicable.

(i) Notification and Reporting Requirements

Effective January 1, 2006, the owner or operator of a flare shall:

(1) Provide a 24 hour telephone service for access by the public for inquiries about flare events. The owner or operator shall provide the Executive Officer in writing the name and number of the initial contact and any contact update.

(2) Notify the Executive Officer by telephone within one hour of any unplanned flare event with emissions exceeding either 100 pounds of VOC or 500 pounds of sulfur dioxide, or exceeding 500,000 standard cubic feet of flared vent gas, and

(3) Submit a Specific Cause Analysis as required by subparagraph (c)(1)(D) to the Executive Officer within 30 days, identifying the cause and duration of the unplanned flare event, and any mitigation and corrective actions

taken. The owner or operator may request the Executive Officer to grant an extension of up to 30 days to submit the Specific Cause Analysis.

(4) Notify the Executive Officer at least 24 hours prior to the start of a planned flare event with emissions exceeding either 100 pounds of VOC or 500 pounds of sulfur dioxide, or 500,000 standard cubic feet of combusted vent gas.

(5) Submit a quarterly report in an electronic format approved by the Executive Officer within 30 days after the end of each quarter. Each quarterly report shall be certified for accuracy in writing by the responsible facility official and shall include the following:

(A) The information required to be monitored under paragraph (g)(3), (g)(4), (g)(5), d (g)(6) and subparagraph (g)(8)(C) of this rule.

(B) The total daily and quarterly emissions of criteria pollutants from each flare and each flare event along with all information used to calculate the emissions, which includes standard volumes, higher heating values and total sulfur concentration of the vent gases, event duration and emission factors. Identify each reported value of flow rate, higher heating values or sulfur concentration reported using Data Substitution Procedures in Attachment B, and identify the data substitution method used and the date the method was approved by the Executive Officer, if applicable.

(i) Emissions from flares shall be calculated using the Emissions Calculation Procedures outlined in Attachment B: Guidelines for Emissions Calculations.

(ii) During all down time periods of the monitoring system, emissions shall be calculated using the Missing Data Substitution Procedures outlined in Attachment B: Guidelines for Emissions Calculations.

(C) The description of the cause of each flare event as analyzed pursuant to subparagraphs (c)(1)(D) and (c)(1)(E) and the category of flare event such as emergency, shutdown, startup or essential operational need or other specific cause(s), and the associated emissions.

(D) Records of annual acoustical or temperature leak survey conducted pursuant to subparagraph (c)(1)(C). The record shall include

identification of all valves inspected, date of inspections, and the name of the person(s) conducting the inspections.

(E) Flare monitoring system downtime periods, including dates and times and explanation for each period.

(F) A copy of written notices for all reportable air releases related to any flare event, as required by 40 CFR, Part 302 - Designation, Reportable Quantities, and Notification and 40 CFR, Part 355 - Emergency Planning and Notification, if applicable.

(j) Testing and Monitoring Methods

(1) For the purpose of this rule, the test methods listed below shall be used. Alternative test methods may be used if it is determined to be equivalent and approved in writing by the Executive Officer, and, if applicable by the California Air Resources Board, and the U.S. Environmental Protection Agency.

(A) The higher (gross) heating value of vent gases shall be determined by:

(i) ASTM Method D 2382-88, ASTM Method D 3588-91 or ASTM Method D 4891-89, and

(ii) Effective July 1, 2007, with a higher heating value analyzer that meets or exceeds the specifications in Attachment A.

(B) The total sulfur concentration, expressed as sulfur dioxide, shall be determined by:

(i) District Method 307-91 or ASTM Method D 5504-01, and

(ii) Effective July 1, 2007, with a total sulfur analyzer that meets or exceeds the specifications in Attachment A.

(C) The gas flow shall be determined by a flow measuring device that meets or exceeds the specifications described in Attachment A, as applicable. The accuracy of all flow meters shall be verified every twelve months according to the manufacturers' procedures and the results shall be submitted to the Executive Officer within 30 days after the reports are issued.

(2) Until the continuous and semi-continuous analyzers are certified by the Executive Officer and operational, analyses for higher (gross) heating value and total sulfur concentration shall be:

(A) Conducted by a District approved lab; or

(B) Conducted by the owner or operator of a gas flare if the District has provided prior written approval of QA/QC and standard operating procedures. All analytical reports shall be signed by the facility official responsible for analytical equipment to certify the accuracy of the reports.

(3) Visible emissions pursuant to subparagraph (c)(1)(B) shall be determined by US EPA Method 22, 40 CFR Part 60 Appendix A.

(4) Notwithstanding paragraph (j)(1) and (j)(2), continuous monitoring systems certified under Rule 2011 - Requirements for Monitoring, Reporting and Recordkeeping of Oxides of Sulfur (SOx) Emissions and Rule 2012 - Requirements for Monitoring, Reporting and Recordkeeping of Oxides of Nitrogen (NOx) Emissions may be used for the monitoring of vent gases.

(k) Exemptions

(1) Notwithstanding a flare monitoring system, consisting of a flow meter, higher heating value analyzer and total sulfur analyzer that is in operation, sampling and analyses of representative samples for higher heating values and total sulfur concentration pursuant to paragraph (g)(3) may not be required for any flare event that:

(A) Is a result of a catastrophic event including a major fire or an explosion at the facility such that collecting a sample is infeasible or constitutes a safety hazard, or

(B) Constitutes a safety hazard to the sampling personnel at the sampling location approved in the Flare Monitoring and Recording Plan during the entire flare event, provided that a sample is collected at an alternative location where it is safe as determined by the facility owner or operator. The owner or operator shall demonstrate to the Executive Officer that the sample collected at an alternative location is representative of the flare event.

(2) Any sulfur dioxide emissions from flaring events caused by external power curtailment beyond the operator's control, (excluding interruptible service agreements), natural disasters or acts of war or terrorism shall not count towards the performance targets specified in subdivision (d) upon submittal of documentation proving the existence of such events and

certified in writing by the petroleum refinery official responsible for emission reporting.

ATTACHMENT A

FLARE MONITORING SYSTEM REQUIREMENTS

The components of each flare monitoring system must meet or exceed the minimum specifications listed below. Components with other specifications may be used provided the owner or operator of a gas flare can demonstrate that the specifications are equivalent and has been approved by the Executive Officer.

1. Continuous Flow Measuring Device

The monitor must be sensitive to rapid flow changes, and have the capability of reporting both instantaneous velocity and totalized flow. Materials exposed to the flare gas shall be corrosion resistant. If required by the petroleum refinery or the hydrogen production plant, the manufacturer must provide an enclosure with an area classification rating of Class 1, Division 2, Groups A, B, C, D, and is FM and CSA approved. The monitor shall (i) feature automated daily calibrations at low and high ranges, and (ii) shall signal alarms if the calibration error or drift is exceeded, provided that the monitor is equipped with such capability. The volumetric flow measuring device may consist of one or more flow meters, and, as combined, shall meet the following specifications.

Velocity Range:	0.1-250 ft/sec
Repeatability:	± 1% of reading over the velocity range
Accuracy:	± 20% of reading over the velocity range of 0.1-1 ft/s and ± 5% of reading over the velocity range of 1-250 ft/s
Installation:	Applicable AGA, ANSI, API, or equivalent standard; hot tap capability. If applicable, the manufacturer must specify the straight-run pipe requirements in terms of the minimum upstream and downstream distances from the nearest flow disturbances to the device
Flow Rate Determination:	Must be corrected to one atmosphere pressure and 68^0 F and recorded as one-minute averages
Data Records	Measured continuously and recorded over one-minute averages. The instrument shall be capable of storing or transferring all data for later retrieval
QA/QC	Shall comply with the flow QA/QC requirements of District Rule 218.1. An annual verification of accuracy is required, and shall be specified by the manufacturer. Note: A flow RATA is generally infeasible due to safety concerns

2. On/Off Flow Indicator

The on/off flow indicator is a device which is used to demonstrate the flow of vent gas during a flare event, and shall meet or exceed specifications as approved by the Executive Officer. The on/off flow indicator setting shall be verifiable.

3. Data Recording System

All data as generated by the above flow meters and the on/off flow indicators must be continuously recorded by strip chart recorders or computers. The strip chart must have a minimum chart width of 10 inches, a readability of 0.5% of the span, and a minimum of 100 chart divisions. The computer must have the capability to generate one-minute average data from that which is continuously generated by the flow meters and the on/off limit switch.

4. Continuous and Semi-continuous Gaseous Stream Higher Heating Value (HHV) Flare Monitoring Systems

The following is intended to ensure that verifiable, meaningful, and representative data are collected from continuous and semi-continuous gaseous stream HHV flare measurement monitoring devices systems. All procedures are subject to Executive Officer review and approval.

General Requirements:

a. The monitoring system must be capable of measuring HHV within the requirements of the rule.

b. The monitoring system must be capable of adjusting to rapid changes in HHV within a reasonable time meeting the definition of a continuous or semi-continuous monitoring system as defined in the applicable rule and as approved by the Executive Officer.

c. Monitoring system sampling interfaces and analyzers in contact with sample gas must be compatible with sample gases and able to resist flow temperatures and pressures.

d. The sampling inlet system interface must be heated as necessary so as to prevent condensation.

e. Sample gas must be conditioned such that the sample is free of particulate or liquid matter.

f. The sample must flow without impediment through the instrument sampling system sampling interface and analyzer.

g. Use an enclosure with an area classification rating of Class 1, Division 2, Groups A, B, C, D, and is FM or CSA approved. The enclosure must be able to maintain a stable analyzer temperature as required for analyzer performance.

h. The monitoring system must feature automated daily calibrations calibration checks, minimally at mid-range, and preferably at both applicable Federal minimum BTU requirements (low end) and 95% of full scale (high end) ranges at low and high ranges

i. The monitoring system system analyzer must include an output compatible with a Data Acquisition System (DAS) or similar system that can process data generated by the analyzer and record the results. A data recorder compatible with analyzer output and capable of recording analyzer output must be supplied with the instrument.

j. Each monitoring system must have a written quality assurance/quality control (QA/QC) plan approved by the Executive Officer and available for District inspection.

k. Maintain a maintenance log for each monitoring system.

l. Perform routine maintenance and repair as recommended by the manufacturer or according to a standard operating procedure submitted and approved by the Executive Officer.

m. The placement and installation of monitoring systems is critical for collecting representative information on HHV gas content. Factors that should be considered in placement of a sampling interface include but are not limited to safety, ensuring the sample is representative of the source, ease of placement and access. Sampling interfaces, conditioning systems and enclosures may be shared with other instrumentation, if appropriate.

n. Perform at monitoring system start-up and on an annual basis a relative accuracy test audit (RATA) which is the ratio of the sum of the absolute mean difference between the monitoring system generated data and the value determined using ASTM D1945-03 and ASTM D3588-91, ASTM D 4891-89, or other ASTM standard as approved by the Executive Officer. See rule 218 (a)(23) for calculations.

o. Periodically perform a calibration curve or linearity verification error test according to permitting conditions and or on a schedule approved by the Executive Officer. Typically, this calibration curve will be prepared from standards representing a:
   i. 10-30 percent of the measurement range
   ii. 40-60 percent of the measurement range
   iii. 80-100 percent of the measurement range

p. Analyzers with auto calibration check capability should be checked daily unless a different calibration frequency is approved by the Executive Officer. For analyzers without auto calibration check capability, submit a calibration check frequency request including supporting documentation to the Executive Officer for comment and approval.

q. Periodically perform a zero drift test. Allowed zero drift should be consistent with a properly operating system. See rule 218(a)(32) for calculations.

r. Retain records on the valid data return percentage.

s. Retain records on the availability or up-time of the monitoring system.

t. Retain records on the breakdown frequency and duration of the breakdown.

u. Retain records on excursions beyond quality control limits stated in the QA plan.

5. Continuous and Semi-continuous Gaseous Stream Total Sulfur Monitoring Systems

The following is intended to ensure that verifiable, meaningful, and representative data are collected from continuous and semi-continuous gaseous stream sulfur monitoring systems. All procedures are subject to Executive Officer review and approval.

General Requirements

a. The monitoring system must be capable of measuring total sulfur concentration within the requirements of the rule.

b. The monitoring system must be capable of adjusting to rapid changes in sulfur concentration within a reasonable time as defined in the applicable rule and as approved by the Executive Officer.

c. Monitoring system in contact with sample gas must be inert to sulfur gases and resistant to corrosion.

d. The sampling inlet system interface system must be heated as necessary so as to prevent condensation.

e. Sample gas must be conditioned such that the sample is free of particulate or liquid matter.

f. The sample must flow without impediment through the instrument sampling system sampling interface and analyzer.

g. Use an enclosure with an area classification rating of Class 1, Division 2, Groups A, B, C, D, and is FM or CSA approved. The enclosure must be able to maintain a stable analyzer temperature as required for analyzer performance.

h. The monitoring system must feature automated daily calibrations at low and high ranges, and shall signal alarms if the calibration error or drift is exceeded.

i. The monitoring system must include a Data Acquisition System (DAS) or similar system that can process data generated by the analyzer and record the results.

j. Each monitoring system must have a written quality assurance/quality control (QA/QC) plan approved by the Executive Officer and available for District inspection.

k. Maintain a maintenance log for each monitoring system.

l. Perform routine maintenance as recommended by the manufacturer or according to a standard operating procedure submitted and approved by the Executive Officer.

m. The placement and installation of monitoring systems is critical for collecting representative information on total sulfur gas concentration. Factors that should be considered in placement of a sampling interface include but are not limited to safety, ensuring the sample is representative

of the source, ease of placement and access. Sampling interfaces, conditioning systems and enclosures may be shared with other instrumentation, if appropriate.

n. Perform at monitoring system start-up and on an annual basis a relative accuracy test audit (RATA) which is the ratio of the sum of the absolute mean difference between the monitoring system generated data and the value determined using SCAQMD Laboratory Method 307-91, ASTM D5504-01 or other ASTM standard as approved by the Executive Officer. See rule 218(a)(23) for calculations.

Note: Facilities are reminded that there are many critical issues for the collection of representative and monitoring system comparable gas samples destined for Method 307-91 or ASTM D5504-01 analysis.

o. Facilities are strongly encouraged to use calibration gases prepared using a NIST hydrogen sulfide SRM, Nederlands Meetinstituut NMi or a NTRM standard as the primary reference.

p. Periodically perform a calibration curve or linearity verification performed according to permitting conditions and/or on a schedule approved by the Executive Officer. Typically, this calibration curve will be prepared from standards representing:

i. 10 to 30 percent of the measurement range
ii. 40 to 60 percent of the measurement range
iii. 80 to 100 percent of the measurement range

q. Analyzers with auto calibration capability shall be calibrated daily unless a different calibration frequency is approved by the Executive Officer. For analyzers without auto calibration capability, submit a calibration frequency request, including supporting documentation to the Executive Officer for comment and approval.

r. Seven Day Calibration Error Test shall be performed by evaluating the analyzer performance over seven consecutive days as necessary. The calibration drift should not exceed five percent of the full-scale range.

s. Analyze daily a control or drift test sample or standard. Adequate system analyzer performance is demonstrated by recoveries of 90 to 110 percent of the theoretical amounts for total reduced sulfur species in the test gas.

t. Periodically perform an analyzer blank test to evaluate the presence of analyzer leaks or wear on sample valves and related components. Replace components as necessary to restore the analyzer to nominal function. A blank should yield results below the monitoring plan approved lower measurement range.

u. Periodically perform a zero drift test. Allowed zero drift should be consistent with a properly operating system analyzer. See rule 218(a)(32) for calculations.

v. Retain records on the valid data return percentage.

w. Retain records on the availability or up-time of the monitoring system.

x. Retain records on the breakdown frequency and duration of the breakdown.

y. Retain records on excursions beyond quality control limits stated in the QA plan.

Gas Chromatograph (GC) Based System Analyzer Specific Requirements

a. The following performance tests specific to GC based sulfur analyzers are part of an overall QA program. This list is not all inclusive. The specific performance tests that are required under rule compliance will be based upon analyzer configuration, data requirements, practical concerns such as safety and are subject to approval by the Executive Officer.

   i. Whenever a calibration is performed and whenever a calibration drift test is performed, examine retention times for each calibration component. Compare the retention times against historically observed retention times. Retention time drift should be better than within five percent. Compare the retention times to analyzer and DAS parameters such as time gates to ensure compatibility. These parameters including the analysis time may need to be updated on occasion.

   ii. Verify daily that the analyzer response drift for individual sulfur species does not exceed ten percent of the control information.

Total Sulfur Analyzer System Requirements

a. The following performance tests specific to total sulfur based analyzers are part of an overall QA program. This list is not all inclusive. The specific performance tests that are required under rule compliance will be based upon instrument analyzer configuration, data requirements, practical concerns such as safety and are subject to approval by the Executive Officer.

   i. Verify daily that the analyzer response drift for the concentration of total sulfur, expressed as sulfur dioxide does not exceed ten percent of the control information.

ATTACHMENT B

GUIDELINES FOR CALCULATING FLARE EMISSIONS

The following methods shall be used to calculate flare emissions. An alternative method may be used, provided it has been approved as equivalent in writing by the Executive Officer.

1. Emission Calculation Procedures

Petroleum refinery, sulfur recovery plant or hydrogen production facility operators shall use the following equations and emission factors to calculate emissions from vent gas, natural gas, propane and butane:

Vent Gas

Air Pollutant	Equation	Emission Factor
ROG	E = V x HHV x EF	0.063 lb/mmBTU
NOx	E = V x HHV x EF	0.068 lb/mmBTU
CO	E = V x HHV x EF	0.37 lb/mmBTU
PM10	E = V x EF	21 lb/mmSCF
SOx	E = V x Cs x 0.1662	Note (1)

Where:

E = Calculate vent gas emissions (lbs)
V= Volume flow of vent gas, as measured in million standard cubic foot at 14.7 psia and 68^0 Fahrenheit
HHV = Higher Heating Value, as measured in British Thermal Unit per standard cubic foot
EF = Emission Factor
Cs = The concentration of total sulfur in the vent gas, expressed as sulfur dioxide, as measured in part per million by volume using the methods specified in this rule.

Note (1) If an approved total sulfur analyzer is used in accordance with this rule, Cs is the concentration of total sulfur in the vent gas, averaged over 15 minutes or less, if the event duration is shorter than 15 minutes.

Note (2) For a flare event where a representative sample or other sampling method is not required pursuant to Table 1 of this rule, use HHV and/or Cs from any representative sample of a flare event on the same day. If no representative sample is taken that day, use HHV and/or Cs from the last representative sample taken prior to the flare event.

Natural Gas

Air Pollutant	Equation	Emission Factor (lb/mmSCF)
ROG	E = V x EF	7
NOx	E = V x EF	130
CO	E = V x EF	35
PM10	E = V x EF	7.5
SOx	E = V x EF	0.83

Propane and Butane

Air Pollutant	Equation	Emission Factor (lb/mmBTU)
ROG	E = V x 3500 x EF	0.003
NOx	E = V x 3500 x EF	0.13
CO	E = V x 3500 x EF	0.032
PM10	E = V x 3500 x EF	0.0014
SOx	E = V x 3500 x EF	0.047

Single On/Off Flow Indicator Switch

The flow rate setting of the on/off flow indicator switch if the switch is not actuated or the maximum design capacity of the flare for the flow rate for each flare event.

Multiple On/Off Flow Indicator Switch

a) The flow rate setting of the first stage on/off flow indicator switch if the switch is not actuated.
b) When an on/off switch is actuated assume the flow rate is the flow rate that would actuate the on/off switch set at the next highest flow rate.
c) Use the maximum design capacity of the flare for the flow rate when the on/off switch set for the highest flow rate is actuated.

Flow Meters Only

a) Use the recorded flow meter data until the maximum range is exceeded.
b) When the maximum range of the flow meter is exceeded, assume the flow rate is the maximum design capacity of the flare(s), unless the owner or operator demonstrates and the Executive Officer approves a calculated flow based upon operational parameters and process data that represent the flow during the period of time that the flow exceeded the maximum range of the flow meter.
c) When the flow rate is below the valid lower range of the flow meter, assume the flow rate is at the lower range.

Combination of Flow Meters and On/Off Flow Indicator Switches

a) Use the recorded flow meter data until the maximum range is exceeded.
b) When the maximum range of the flow meter is exceeded, assume the flow rate is the flow rate that would actuate the on/off switch set at the next highest flow rate.
c) Use the maximum design capacity of the flare for the flow rate when the on/off switch set for the highest flow rate is actuated.
d) When the flow rate is below the valid lower range of the flow meter, assume the flow rate is at the lower range.
e) When the flow rate is below the valid lower range of the flow meter and the set flow rate of an on/off switch, assume the flow rate is the flow rate that would actuate the on/off switch.

2. Data Substitution Procedures

For any time period for which the vent gas flow, the higher heating value or the total sulfur concentration, expressed as sulfur dioxide, are not measured, analyzed and recorded pursuant to the requirements of this rule, unless the owner or operator of a petroleum refinery, sulfur recovery plant or hydrogen production plant demonstrates using verifiable records of flare water seal level and/or other parameters as approved by the Executive Officer in the Flare Monitoring and Recording Plan or the Revised Flare Monitoring and Recording Plan that no flare event occurred during the period these parameters were not measured, analyzed or recorded, the operator shall substitute and report the following values:

a) If the flow rate is not measured or recorded for any flare event, the totalized flow shall be calculated from the methodology in section 2(a)(i) below, unless the Executive Officer approves the method specified in Section 2(a)(ii).

i) The totalized flow shall be calculated from the product of the flare event duration and the estimated flow rate. The flow rate shall be calculated using the following equation for the period of time the flow meter was out of service:

$$FR = \text{Max. FR} - 0.5(\text{Max. FR} - \text{Avg. FR})$$

Where:

FR = Estimated Flow Rate (standard cubic feet per minute)

Max FR = Maximum flow rate that was measured and recorded for that flare during the previous 20 quarters preceding the flare event. This maximum value is based on the average flow rate during an individual flare event, not an instantaneous maximum value.

Avg FR = Average flow rate for all measured and recorded flow rates for all sampled flare events for that flare, during the previous 20 quarters preceding the subject flare event.

The duration of a flare event during periods when the flow meter is out of service shall be determined using an alternate method approved by the Executive Officer in the Flare Monitoring and Recording Plan or Revised Flare Monitoring and Recording Plan.

In the absence of an approved alternate method to determine the duration of the flare event during periods when the flow meter is out of service, the operator shall report the flare to be venting for the entire time the flow meter is out of service.

ii) Alternate methods using recorded and verifiable operational parameters and/or process data, including reference to similar events that have previously occurred, approved by the Executive Officer to be representative of the volume of vent gas, may be used to determine the flow rate in lieu of the method specified above.

b) If the higher heating value is not measured or recorded for any flare event pursuant to the requirements of this rule, the higher heating value shall be calculated from the methodology in section 2(b)(i) below, unless the Executive Officer approves the method specified in Section 2(b)(ii).

i) The higher heating value shall be calculated using the following equation for the period of time this parameter was not measured or recorded:

$$HHV = Max\ HHV - 0.5(Max\ HHV - Avg\ HHV)$$

Where:

HHV = Estimated higher heating value (Btu/scf)

Max HHV = Maximum HHV measured and recorded for that flare during the previous 20 quarters preceding the flare event.

Avg HHV = Average value of all HHV measured and recorded for that flare for all sampled flare events during the previous 20 quarters preceding the flare event.

ii) Alternate methods using recorded and verifiable operational parameters and/ or process data, including reference to similar events that have previously occurred, approved by the Executive Officer to be representative of the HHV of the vent gas, may be used to determine the HHV in lieu of the method specified above.

c) If the total sulfur concentration, expressed as sulfur dioxide, is not measured or recorded for any flare event pursuant to the requirements of this rule, it shall be calculated from the methodology in section 2(c)(i) below, unless the Executive Officer approves the method specified in Section 2(c)(ii).

i) The total sulfur concentration expressed as sulfur dioxide shall be calculated using the following equation for the period of time this parameter was not measured or recorded:

$$SFE = Max\ SFE - 0.5(Max\ SFE - Avg\ SFE)$$

Where:

SFE = Estimated total sulfur concentration, expressed as sulfur dioxide (ppmv)

Max SFE = Maximum total sulfur concentration expressed as sulfur dioxide measured and recorded for that flare during the previous 20 quarters preceding the flare event.

Avg SFE = Average value of all total sulfur concentrations measured and recorded for that flare for all sampled flare events during the previous 20 quarters preceding the flare event.

ii) Alternate methods using recorded and verifiable operational parameters and/ or process data, including reference to similar events that have previously occurred, approved by the Executive Officer to be representative of the total sulfur concentration of the vent gas expressed

as sulfur dioxide, may be used to determine the total sulfur concentration in lieu of the method specified above.

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

(Adopted March 2, 1979)

RULE 1119. PETROLEUM COKE CALCINING OPERATIONS - OXIDES OF SULFUR

(a) A person shall not operate petroleum coke calcining equipment unless the uncontrolled emissions of oxides of sulfur from such basic equipment, expressed as sulfur dioxide (SO_2), are reduced by at least 80 percent.

(b) Any equipment owner or operator subject to the provisions of section (a) of this rule shall comply with the following schedule of increments of progress:

1. By December 1, 1980, 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 this rule.
2. By June 1, 1981, award the contract for an emission control system, or issue purchase orders for the component parts to accomplish emission control.
3. By September 1, 1981, initiate on-site construction or installation of equipment to reduce or control emissions.
4. By May 1, 1983, complete on-site construction or installation of equipment to reduce or control emissions.
5. By July 1, 1983, assure final compliance with the provisions of this rule.

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

(Adopted August 4, 1978)

RULE 1120. ASPHALT PAVEMENT HEATERS

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.

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

(Adopted December 1, 1978)(Amended March 10, 1995)(Amended December 10, 1999)

RULE 1121 -CONTROL OF NITROGEN OXIDES FROM RESIDENTIAL TYPE, NATURAL GAS-FIRED WATER HEATERS

(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)HEAT INPUT means the heat of combustion released by fuels burned in a unit based on the higher heating value of fuel. This does not include the enthalpy of incoming combustion air.

(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)MITIGATION FEE is an emission reduction option, in which monies collected by the District from water heater manufacturers are placed in a restricted fund and are used to fund stationary and mobile source emission reduction programs targeted at equivalent NO_X emission reductions as to those that would have otherwise occurred and have been approved by the District's Governing Board.

(6)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°F (99°C).

(7)NOx EMISSIONS means the sum of nitric oxide and nitrogen dioxide in the flue gas, collectively expressed as nitrogen dioxide.

(8)PROTOCOL means South Coast Air Quality Management District Protocol: *Nitrogen Oxides Emissions Compliance Testing for Natural Gas-Fired Water Heaters and Small Boilers*, January 1998.

(9)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 from the heat input capacity specified on the nameplate, the new maximum heat input shall be considered as the rated heat input capacity.

(10) RECREATIONAL VEHICLE means either a motor home, travel trailer, truck camper, or camping trailer, with or without motive power, designed for human habitation for recreational, emergency, or other occupancy, as defined pursuant to Section 18010 of the California Health and Safety Code.

(11) 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°F (99°C).

(c)Requirements

(1)Until July 1, 2002, no person shall manufacture for sale, distribute, sell, offer for sale, or install within the South Coast Air Quality Management District any gas-fired water heaters unless the water heater is certified pursuant to subdivision (d) to a NO_x emission level of less than or equal to:

(A)40 nanograms of NOx (calculated as NO_2) per joule of heat output (93 lb per billion Btu of heat output); or

(B)55 ppmv at 3% O_2, dry (71 lb per billion Btu of heat input).

(2)On or after July 1, 2002, no person shall manufacture for sale, distribute, sell, offer for sale, or install within the South Coast Air Quality Management District any gas-fired water heaters unless the water heater is certified pursuant to subdivision (d) to a NO_x emission level of less than or equal to:

(A)20 nanograms of NO_x (calculated as NO2) per joule of heat output (46.5 lb per billion Btu of heat output); or

(B)30 ppmv at 3% O_2, dry (35 lb per billion Btu of heat input); or

(C)the emission limit specified in subparagraph (c)(1)(A) or (c)(1)(B) provided the manufacturer of the water heater meets the requirements of subdivision (f).

(3)On or after January 1, 2005, no person shall manufacture for sale, distribute, sell, offer for sale, or install within the South Coast Air Quality Management District any gas-fired water heaters unless the water heater is certified pursuant to subdivision (d) to a NO_x emission level of less than or equal to:

(A)10 nanograms of NO_x (calculated as NO2) per joule of heat output (23 lb per billion Btu of heat output); or

(B)15 ppmv at 3% O_2, dry (17.5 lb per billion Btu of heat input).

(4)On and after January 1, 2000, no person shall manufacture for sale, distribute, sell, offer for sale, or install within the South Coast Air Quality Management District any gas-fired mobile home water heaters unless the water heater is certified pursuant to subdivision (d) to a NO_x emission level of less than or equal to:

(A)40 nanograms of NO_x (calculated as NO2) per joule of heat output (93 lb per billion Btu of heat output); or

(B)55 ppmv at 3% O2, dry (71 lb per billion Btu of heat input).

(5) The manufacturer of any water heater manufactured for sale in the district shall clearly display on the shipping carton and the name plate of the water heater:

(A)the model number;

(B)the date of manufacture; and

(C)the certification status.

(6) Notwithstanding the requirements in paragraph (c)(2), until January 1, 2003, any person may distribute, sell, offer for sale, or install any gas-fired water heater that is manufactured prior to July 1, 2002 and in compliance with the emission level specified in paragraph (c)(1).

(7) Notwithstanding the requirements in paragraph (c)(3), until July 1, 2005 any person may distribute, sell, offer for sale, or install any gas-fired water heater that is manufactured prior to January 1, 2005 and in compliance with the emission level specified in paragraph (c)(2).

(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 by the manufacturer and dated, and shall attest to the accuracy of all statements;

(B)General Information

(i)Name and address of manufacturer,

(ii)Brand name, trade 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)When applying for certification of water heaters for compliance with the emission limit specified in paragraph (c)(2) or (c)(3), the manufacturer shall submit the information identified in paragraph (d)(2) at least 90 days prior to the effective compliance date specified in either paragraph (c)(2) or (c)(3), respectively.

(5)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).

(6)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).

(e) Interim Progress Report

On or before July 1, 2003, any person that manufacturers water heaters for sale within the South Coast Air Basin shall submit to the Executive Officer an interim progress report that shall include:

(1)A description of the technology to meet the NO_x emission level specified under paragraph (c)(3);

(2)The laboratory test results for a water heater developed to meet the NO_x emission level specified under paragraph (c)(3) that shall include the emissions rate measured by an independent testing laboratory using the SCAQMD protocol specified under paragraph (b)(8);

(3) Identification of any issues that need to be addressed prior to commercialization, efforts that have been made to reach commercialization, the approach that will be taken to resolve these issues, and the timeline; and

(4)Estimated manufacturing date.

(f) Mitigation Fee

Any manufacturer that elects to submit a mitigation fee to the District to meet the NO_x emission level established under subparagraph (c)(2)(C) shall:

(1) submit a Mitigation Fee Plan to the Executive Officer 180 days prior to complying with the provisions of paragraph (c)(2), where the Mitigation Fee Plan includes:

(A) the name of the manufacturer;

(B)the amount of NOx emission reductions needed as determined under paragraph (f)(3);

(C)the compliance period that the mitigation fee covers shall not exceed a 12-month time period; and

(D)the number of water heaters sold over the compliance period, which shall be based on sales records or invoices of water heaters in a similar model and size that were sold in the district over the past 12 months.

(2) receive written verification from the Executive Officer that the Mitigation Fee Plan was approved prior to complying with the provisions of paragraph (c)(2);

(3) pay a mitigation fee in the amount of $5,400 per ton of NOx multiplied by the amount of NOx emission reductions needed as specified in Equation 1;

Equation 1:

where:

MF = Mitigation fee, Dollars

t = Time period that mitigation fee covers as specified in subparagraph (f)(1)(C)

n = Number of water heaters sold as specified in subparagraph (f)(1)(D)

(4) label water heaters identified in the Mitigation Fee Plan;

(5) maintain records and report sales of water heaters covered by the Mitigation Fee Plan and if the number of water heaters originally estimated exceed the number of water heaters identified in subparagraph (f)(1)(D), the water heater manufacturer shall update the Mitigation Fee Plan within 60 days after the end of the compliance period.

(g)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).

(h)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 recreational vehicles.

(Adopted December 1, 1978)(Amended March 10, 1995)(Amended December 10, 1999)
(Amended September 3, 2004)

RULE 1121 CONTROL OF NITROGEN OXIDES FROM RESIDENTIAL TYPE, NATURAL GAS-FIRED WATER HEATERS

(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) DIRECT-VENT WATER HEATER means a water heater with air intake and exhaust ducts that use a gravity system to collect air from outside a building for combustion and exhaust combustion byproducts to the outside of a building.

(3) HEAT INPUT means the heat of combustion released by fuels burned in a unit based on the higher heating value of fuel. This does not include the enthalpy of incoming combustion air.

(4) HEAT OUTPUT means the product H_o as defined in Section 9.3 of the Protocol.

(5) 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.

(6) MITIGATION FEE is an emission reduction option, in which monies collected by the District from water heater manufacturers are placed in a restricted fund and are used to fund stationary and mobile source emission reduction programs targeted at equivalent NO_x emission reductions as to those that would have otherwise occurred and have been approved by the District's Governing Board.

(7) 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°F (99°C).

(8) NO_X EMISSIONS means the sum of nitric oxide and nitrogen dioxide in the flue gas, collectively expressed as nitrogen dioxide.

(9) POWER-VENT WATER HEATER means a water heater with a blower installed to assist in the expulsion of exhaust gases.

(10) POWER DIRECT-VENT WATER HEATER means a water heater with an air intake duct outside of a building with a blower installed to assist in the expulsion of exhaust gases.

(11) PROTOCOL means South Coast Air Quality Management District Protocol: *Nitrogen Oxides Emissions Compliance Testing for Natural Gas-Fired Water Heaters and Small Boilers*, January 1998.

(12) 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 from the heat input capacity specified on the nameplate, the new maximum heat input shall be considered as the rated heat input capacity.

(13) RECREATIONAL VEHICLE means either a motor home, travel trailer, truck camper, or camping trailer, with or without motive power, designed for human habitation for recreational, emergency, or other occupancy, as defined pursuant to Section 18010 of the California Health and Safety Code.

(14) 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°F (99°C).

(c) Requirements

(1) Until July 1, 2002, no person shall manufacture for sale, distribute, sell, offer for sale, or install within the South Coast Air Quality Management District any gas-fired water heaters unless the water heater is certified pursuant to subdivision (d) to a NO_x emission level of less than or equal to:

(A) 40 nanograms of NO_X (calculated as NO_2) per joule of heat output (93 lb per billion Btu of heat output); or

(B) 55 ppmv at 3% O_2, dry (71 lb per billion Btu of heat input).

(2) On or after July 1, 2002, no person shall manufacture for sale, distribute, sell, offer for sale, or install within the South Coast Air Quality Management District any gas-fired water heaters unless the water heater is certified pursuant to subdivision (d) to a NO_x emission level of less than or equal to:

(A) 20 nanograms of NO_x (calculated as NO_2) per joule of heat output (46.5 lb per billion Btu of heat output); or

(B) 30 ppmv at 3% O_2, dry (35 lb per billion Btu of heat input); or

(C) the emission limit specified in subparagraph (c)(1)(A) or (c)(1)(B) provided the manufacturer of the water heater meets the requirements of subdivision (e).

(3) On or after January 1, 2006, for water heaters less than or equal to 50 gallon capacity, excluding direct-vent, power-vent and power direct-vent water heaters; on or after January 1, 2007 for water heaters greater than 50 gallon capacity, excluding direct-vent, power-vent and power direct-vent water heaters; and on and after January 1, 2008 for all direct-vent, power-vent, and power direct-vent water heaters; no person shall manufacture for sale, distribute, sell, offer for sale, or install within the South Coast Air Quality Management District any gas-fired water heaters unless the water heater is certified pursuant to subdivision (d) to a NO_x emission level of less than or equal to:

(A) 10 nanograms of NO_x (calculated as NO_2) per joule of heat output (23 lb per billion Btu of heat output); or

(B) 15 ppmv at 3% O_2, dry (17.5 lb per billion Btu of heat input).

(4) On and after January 1, 2000, no person shall manufacture for sale, distribute, sell, offer for sale, or install within the South Coast Air Quality Management District any gas-fired mobile home water heaters unless the water heater is certified pursuant to subdivision (d) to a NO_x emission level of less than or equal to:

(A) 40 nanograms of NO_x (calculated as NO_2) per joule of heat output (93 lb per billion Btu of heat output); or

(B) 55 ppmv at 3% O_2, dry (71 lb per billion Btu of heat input).

(5) The manufacturer of any water heater manufactured for sale in the district shall clearly display on the shipping carton and the name plate of the water heater:

(A) the model number;

(B) the date of manufacture; and

(C) the certification status.

(6) Notwithstanding the requirements in paragraph (c)(3), until July 1, 2006, any person may distribute, sell, offer for sale, or install ~~any~~ gas-fired water heaters less than or equal to 50 gallon capacity that are manufactured prior to January 1, 2006 and in compliance with paragraph (c)(2).

(7) Notwithstanding the requirements in paragraph (c)(3), until July 1, 2007, any person may distribute, sell, offer for sale, or install gas-fired water heaters greater than 50 gallon capacity that are manufactured prior to January 1, 2007 and in compliance with paragraphs (c)(2).

(8) Notwithstanding the requirements in paragraph (c)(3), until July 1, 2008, any person may distribute, sell, offer for sale, or install gas-fired direct-vent, power-vent, or power direct-vent water heaters that are manufactured prior to January 1, 2008 and in compliance with paragraphs (c)(2).

(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 by the manufacturer and dated, and shall attest to the accuracy of all statements;

(B) General Information

(i) Name and address of manufacturer,

(ii) Brand name, trade 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) When applying for certification of water heaters for compliance with the emission limit specified in paragraph (c)(2) or (c)(3), the manufacturer shall submit the information identified in paragraph (d)(2) at least 90 days prior to the effective compliance date specified in either paragraph (c)(2) or (c)(3), respectively.

(5) 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).

(6) 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).

(e) Mitigation Fee

Any manufacturer that elects to submit a mitigation fee to the District to meet the NO_x emission level established under subparagraph (c)(2)(C) shall:

(1) submit a Mitigation Fee Plan to the Executive Officer 180 days prior to complying with the provisions of paragraph (c)(2), where the Mitigation Fee Plan includes:

(A) the name of the manufacturer;

(B) the compliance period that the mitigation fee covers shall not exceed a 12-month time period; and

(C) the number of water heaters sold over the compliance period, which shall be based on sales records or invoices of water heaters in a similar model and size that were sold in the district over the past 12 months.

(2) receive written verification from the Executive Officer that the Mitigation Fee Plan was approved prior to complying with the provisions of paragraph (c)(2);

(3) on and after January 1, 2005, pay a mitigation fee at the beginning of the compliance period in the amount of $3.00 per water heater sold as specified in subparagraph (e)(1)(C), over the time period the mitigation fee covers as specified in subparagraph (e)(1)(B); and before January 1, 2005,_pay a mitigation fee in the amount of $5,400 per ton of NOx multiplied by the amount of NOx emission reductions needed as specified in Equation 1;

Equation 1:

$$MF = \$5{,}400/ton \times \left[\frac{t \times n \times (190 therms/yr) \times (93 - 46.5 lbs/billionBtu - output) \times 0.76}{2000 \times 10{,}000} \right]$$

where:

MF = Mitigation fee, Dollars

t = Time period that mitigation fee covers as specified in subparagraph (f)(1)(C)

n = Number of water heaters sold as specified in subparagraph (f)(1)(D)

(4) label water heaters identified in the Mitigation Fee Plan;

(5) maintain records and report sales of water heaters covered by the Mitigation Fee Plan and if the number of water heaters originally estimated exceed the number of water heaters identified in subparagraph (e)(1)(C), the water heater manufacturer shall update the Mitigation Fee Plan within 60 days after the end of the compliance period. Make these records available to the Executive Officer upon request, for a period of at least three years after the end of the compliance period.

(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 recreational vehicles.

(h) Final Progress Report

On or before April 1, 2007, any person that manufacturers direct-vent, power-vent or power direct-vent water heaters for sale within the South Coast Air Basin shall submit to the Executive Officer a final progress report that shall include:

(1) Identification of efforts that have been made to reach commercialization of direct-vent, power-vent, and power direct-vent water heaters that meet the NO_x emission level specified under paragraph (c)(3);

(2) A description of the technologies used to meet the NO_x emission level for direct-vent, power-vent, and power direct-vent water heaters specified under paragraph (c)(3); and

(3) Complete documentation for at least three laboratory test results each for direct-vent, power-vent, and power direct-vent water heaters developed to

meet the NO_x emission level specified under paragraph (c)(3) that shall include the emissions rate measured by an independent testing laboratory using the SCAQMD protocol specified under paragraph (b)(11) or other protocol approved in advance by the Executive Officer.

(i) Program Administration

On and after September 3, 2004, the Executive Officer is authorized to use up to 5% of the mitigation fee funds collected in any given year for program administration.

(Adopted March 2, 1979)(Amended June 1, 1979)(Amended February 1, 1980)
(Amended July 8, 1983)(Amended May 5, 1989)(Amended April 5, 1991)
(Amended July 11, 1997)(Amended September 21, 2001)(Amended December 6, 2002)
(Amended October 1, 2004)

RULE 1122. SOLVENT DEGREASERS

(a) Applicability

This rule applies to all persons who own or operate batch-loaded cold cleaners, open-top vapor degreasers, all types of conveyorized degreasers, and air-tight and airless cleaning systems that carry out solvent degreasing operations with a solvent containing Volatile Organic Compounds (VOCs) or with a NESHAP halogenated solvent. Solvent degreasing operations that are regulated by this rule include, but are not limited to, the removal of contaminants 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 VAPOR DEGREASERS.

(4) AIR-SOLVENT INTERFACE SURFACE AREA means the combined geometric surface areas of the projected plane surfaces of all degreaser openings for CONVEYORIZED COLD CLEANERS.

(5) AIRLESS/AIR-TIGHT CLEANING SYSTEM is a sealed cleaning system that has no open air/vapor or air/solvent interface, and is designed and automatically operated in such a manner as to minimize the discharge or leakage of solvent vapor emissions to the atmosphere during all cleaning and vacuum drying operations. The system consists of devices to

condense and recover solvent and solvent vapor, and control devices to remove solvent vapors from all gas streams that vent to the atmosphere.

(6) AUTOMATED PARTS HANDLING SYSTEM, such as a hoist or a conveyor, is a mechanical device that carries all parts and parts baskets, at a controlled speed, from the initial loading of soiled or wet parts through the removal of the cleaned or dried parts.

(7) BATCH-LOADED COLD CLEANER is a batch-operated degreaser that is designed to contain liquid solvent, has an air-solvent interface, and is always operated at a temperature below the solvent's boiling point.

(8) CLEAN AIR SOLVENT is as defined in Rule 102.

(9) CLEAN AIR SOLVENT CERTIFICATE is a certificate issued by the District to a manufacturer, distributor, or facility for a specified product or class of products that meets the criteria for a Clean Air Solvent.

(10) CIRCUMFERENTIAL TROUGH is a receptacle located below the primary condenser that conveys condensed solvent and atmospheric moisture to a water separator.

(11) CONDENSER WATER FLOW SWITCH is a safety switch that turns off the sump heat if the condenser water fails to circulate, or the temperature of the condenser water rises above the design operating temperature.

(12) CONVEYORIZED (IN-LINE) COLD CLEANER 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 cleaning zone.

(13) CONVEYORIZED (IN-LINE) VAPOR DEGREASER is any degreaser which uses an integral, continuous, mechanical system for moving materials or parts to be cleaned into and out of a vapor cleaning zone.

(14) DOWNTIME MODE means the time period when a solvent degreaser is not cleaning parts and the sump heating coils are turned off.

(15) DWELL TIME is the period of time when parts are held within the freeboard area of the degreaser, after cleaning, to allow solvent to drain from the parts back into the machine.

(16) DRAG-OUT is that solvent carried out of a degreaser that adheres to or is entrapped in the part being removed.

(17) DEGREASER is any equipment designed and used for holding a solvent to carry out solvent cleaning operations including, but not limited to, batch-loaded cold cleaners, open-top vapor degreasers, conveyorized (in-line) degreasers, and air-tight and airless cleaning systems.

(18) 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.

(19) ELECTRONIC COMPONENT is that portion 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.

(20) EXEMPT COMPOUND is as defined in Rule 102.

(21) FREEBOARD AREA is the air space in a batch-loaded cold cleaner that extends from the liquid surface to the top of the tank.

(22) 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.

(23) FREEBOARD RATIO is the freeboard height divided by the smaller of either the inside length or inside width of the degreaser.

(24) HIGH PRECISION OPTIC is an optical element used in an electro-optical device and is designed to sense, detect, or transmit light energy, including specific wavelengths of light energy and changes in light energy levels.

(25) IDLING MODE means the time period when a solvent degreaser is turned on, but is not actively cleaning parts.

(26) LIQUID LEAK is a VOC-containing liquid leak from the degreaser at a rate of three drops per minute or more or any visible liquid mist.

(27) MEDICAL DEVICE is 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.

(28) NESHAP HALOGENATED SOLVENT is a solvent that contains 5 percent or more by weight of any one or any combination of halogenated

hazardous air pollutant solvent as defined in the most recent version of 40 CFR Part 63, Subpart T - National Emission Standards for Halogenated Solvent Cleaning (Section 63.461), including, but not limited to the following compounds: carbon tetrachloride, chloroform, perchloroethylene, 1,1,1-trichloroethane, trichloroethylene, and methylene chloride.

(29) OPEN-TOP VAPOR DEGREASER is any batch-loaded, boiling solvent degreaser.

(30) 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.

(31) PRIMARY CONDENSER means a series of circumferential cooling coils on the inside walls of a vapor degreaser through which a chilled substance is circulated or recirculated to provide continuous condensation of rinsing solvent vapors, thereby creating a concentrated solvent vapor zone.

(32) 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.

(33) ROTATING BASKET is a perforated or wire mesh cylinder containing parts to be cleaned that is slowly rotated while proceeding through the degreaser.

(34) SOLVENT DEGREASING is any portion of the operation from the removal of contaminants with solvents, from parts, products, tools, machinery, and equipment to the subsequent drying of the items.

(35) SOLVENT CONTAINER is that part of the degreaser that is intended to hold the cleaning solvent.

(36) SPRAY PUMP CONTROL SWITCH is a safety switch that prevents the spray pump from operating without an adequate vapor level.

(37) SUPERHEATED VAPOR ZONE is a region located within the vapor zone of a degreaser whereby solvent vapors are heated above the solvent's boiling point.

(38) 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.

(39) VOLATILE ORGANIC COMPOUND (VOC) is as defined in Rule 102.

(40) WATER SEPARATOR is a device that isolates water from an organic solvent or a mixture of organic solvents by a variety of means including, but not limited to, extraction, evaporation, distillation, drying, adsorption, and filtration.

(41) 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) Work Practice Requirements

Any person owning or operating the following type of degreasers with a VOC-containing solvent shall meet the following work practice requirements:

(1) Batch-Loaded Cold Cleaners

(A) The degreaser shall be operated in accordance with the manufacturer's specifications, and be used with tightly fitting covers that are free of cracks, holes or other defects. In addition, the cover shall be closed at all times when the degreaser contains solvent, except during parts entry and removal or performing maintenance or monitoring that requires the removal of the cover.

(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

(i) At least 15 seconds have elapsed; or

(ii) Dripping of solvent ceases; or

(iii) The parts become visibly dry.

Parts with blind holes or cavities shall be tipped or rotated before being removed from a degreaser, such that the solvents in the blind holes or cavities are drained in accordance with the above requirements.

(D) 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, visible tears, or cracks. In addition, any liquid leak, visible tear, or crack detected pursuant to the provisions of this subparagraph shall be repaired within 48 hours, or the degreaser shall be drained of all solvent and shut down until replaced or repaired.

(E) Draining or filling of solvent containers shall be performed beneath the liquid solvent surface.

(F) All waste solvents shall be stored in properly identified and sealed containers. All associated pressure relief devices shall not allow liquid solvents to drain out.

(G) Solvent flow cleaning shall be done within the freeboard area, and shall be done by a liquid stream rather than a fine, atomized, or shower-type spray. Solvent flow shall be directed downward to avoid turbulence at the 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 accomplished 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;

(ii) The cover must remain closed while the air agitation system is in operation; and

(iii) Pump circulation shall be performed without causing splashing.

(J) 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).

(K) Ventilation fans shall not be positioned in such a way as to direct airflow near the degreaser openings.

(L) Spills during solvent transfer shall be wiped up immediately and the used wipe rags shall be stored in closed containers that are handled in accordance with subparagraph (c)(1)(F).

(M) Solvent levels shall not exceed the fill line.

(2) Open-Top and Conveyorized (In-Line) Vapor Degreasers

(A) The degreaser shall be operated in accordance with the manufacturer's specifications and be used with a tightly-fitting cover that is free of cracks, holes or other defects, except as provided in subparagraph (e)(2)(B). In addition, the cover shall be closed during idling and downtime modes, except while performing maintenance or monitoring that requires the removal of the cover.

(B) 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, visible tears, or cracks. In addition, any liquid leak, visible tear, or crack detected pursuant to the provisions of this subparagraph shall be repaired within 48 hours, or the degreaser shall be drained of all solvents and shut down until replaced or repaired.

(C) Degreasing of porous or absorbent materials, such as cloth, leather, wood, or rope, is prohibited.

(D) Transfer of solvent into or out of solvent containers shall be performed with leak-proof couplings, and the end of the pipe in the solvent sump shall be located beneath the liquid solvent surface.

(E) The vertical speed of the powered hoist or conveyor shall not be more than 3.4 meters per minute (11.2 feet per minute) when lowering and raising parts in and out of the degreaser, respectively.

(F) The average draft rate in the workroom, as measured parallel to the plane of the degreaser opening, shall not exceed 9.1 meters per minute (30 feet per minute).

(G) At start up, the primary condenser and the refrigerated freeboard chiller, if one is required, shall be turned on before the sump heater is turned on. At shutdown, the sump heater shall be turned off before the primary condenser and refrigerated freeboard chiller are turned off.

(H) The water separator shall be maintained to prevent water from returning to the surface of the boiling solvent sump or from becoming visibly detectable in the solvent exiting the water separator.

(I) The workload area shall not exceed more than half of the degreaser's air-vapor interface surface area.

(J) The workload shall be degreased in the vapor zone until condensation ceases.

(K) The temperature within the superheated vapor zone shall be at least 10°F above the boiling point of the solvent being used.

(L) Parts and parts baskets shall remain in the superheated vapor zone for at least the minimum proper dwell time, as stated in the manufacturer's specification.

(M) Solvent flow cleaning shall be done within the vapor zone and shall be done by 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 interface and to prevent liquid solvent from splashing out of the degreaser.

(N) Ventilation fans shall not be positioned in such a way as to direct airflow near the degreaser openings.

(O) All waste solvents shall be stored in properly identified and sealed containers. All associated pressure relief devices shall not allow liquid solvents to drain out.

(P) Spills during solvent transfer shall be wiped up immediately and the used wipe rags shall be stored in closed containers that are handled in accordance with subparagraph (c)(2)(O).

(Q) Solvent levels shall not exceed the fill line.

(3) The applicable requirements of paragraphs (c)(1) and (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.

(d) Control Standards for Batch-Loaded and Conveyorized (In-Line) Cold Cleaners

Any person owning or operating a batch-loaded cold cleaner or a conveyorized (in-line) cold cleaner with a VOC-containing solvent shall meet all of the following applicable requirements:

(1) Batch-Loaded Cold Cleaners

(A) Cleaning materials shall have a VOC content of 25 g/l or less, as used.

(B) A device for draining cleaned parts shall be used such that drained or dragout solvent is returned.

(2) Conveyorized (In-Line) Cold Cleaners

(A) Cleaning materials shall have a VOC content of 25 g/l or less, as used.

(e) Design Requirements and Control Standards for Open-Top and Conveyorized (In-Line) Vapor Degreasers

In addition to the applicable requirements of paragraph (c)(2), any person owning or operating an open-top or conveyorized (in-line) vapor degreaser with a VOC-containing solvent shall also meet all of the following applicable requirements:

(1) Open-Top Vapor Degreaser

(A) The degreaser shall be operated with all of the following safety switches installed:

(i) Vapor level control switch;

(ii) Condenser water flow switch, for water-cooled degreasers;

(iii) Spray pump control switch, for solvent flow cleaning; and

(iv) Sump heat shut-off process control switch or a float for low liquid level indication.

(B) The degreaser shall be equipped with:

(i) an automated parts handling system;

(ii) circumferential primary condensing coils;

(iii) a circumferential trough;

(iv) a water separator;

(v) a freeboard ratio of at least 1.0, and

(vi) a superheated vapor zone.

In lieu of the superheated vapor zone, a refrigerated freeboard chiller may be used if the chilled air blanket temperature, measured at the center of the air blanket, is no greater than 40% of the boiling point of the solvent, in degrees Fahrenheit, for solvents that do not form azeotropes with water, or 50% of the boiling point, in degrees Fahrenheit, for solvents that form azeotropes with water. A water separator is not required for solvents that form azeotropes with water.

(2) Conveyorized (In-Line) Vapor Degreasers

(A) The degreaser shall be equipped with a high vapor cutoff thermostat with manual reset;

(B) Entrances and exits shall 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, whichever is less.

(C) All conveyorized (in-line) vapor degreasers shall be equipped with:

(i) an automated parts handling system;

(ii) circumferential primary condensing coils;

(iii) a circumferential trough;

(iv) a water separator;

(v) a freeboard ratio of at least 1.0;

(vi) a refrigerated freeboard chiller that is operated such that the chilled air blanket temperature measured at the center of the air blanket is no greater than 40% of the boiling point of the solvent, in degrees Fahrenheit, for solvents that do not form azeotropes with water, or 50% of the boiling point, in degrees Fahrenheit, for solvents that form azeotropes with water. A water separator is not required for solvents that form azeotropes with water, and;

(vii) a superheated vapor zone.

(3) Effective January 1, 2006, vapor degreasing operations shall be performed using a solvent with a VOC content of no more than 25 g/l, as used.

(f) Airless/Air-tight Cleaning System Requirements

In lieu of meeting the requirements of subdivisions (d) or (e), any person may use an airless/air-tight batch cleaning system, or a District, CARB and USEPA approved alternative cleaning system that achieves equivalent emission reductions, provided that all of the following applicable requirements are met:

(1) The equipment is operated in accordance with the manufacturer's specifications and operated with a door or other pressure sealing apparatus that is in place during all cleaning and drying cycles.

(2) All waste solvents are stored in properly identified and sealed containers. All associated pressure relief devices shall not allow liquid solvents to drain out.

(3) Spills during solvent transfer shall be wiped up immediately, and the used wipe rags shall be stored in closed containers that are handled in accordance with paragraph (f)(2).

(4) The equipment is maintained in a vapor-tight, leak-free condition and any leak is a violation.

(g) Degreasers Using NESHAP Halogenated Solvents

(1) The provisions of this subdivision are applicable to any batch-loaded cold cleaner, open-top vapor degreasers, and conveyorized (in-line) degreasers using NESHAP halogenated solvents as defined in paragraph (b)(28), as a cleaning solvent.

(2) The owner or operator shall operate the equipment in compliance with the most recent version of 40 CFR Part 63, Subpart T - National Emission Standards for Halogenated Solvent Cleaning (Sections 63.460 - 63.469).

(3) Effective January 1, 2003, any owner or operator of a solvent cleaning device as specified in paragraph (g)(1) shall use such equipment with an airless/air-tight cleaning system or approved alternative equipment that complies with the requirements of subdivision (f).

(h) 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), or by the most recent version of SCAQMD Method 304 [Determination of Volatile Organic Compounds (VOCs) in Various Materials] contained in the SCAQMD "Laboratory Methods of Analysis for Enforcement Samples" manual. The VOC content of materials containing 50 g/l of VOC or less shall be determined by the most recent version of SCAQMD Method 313 (Determination of Volatile Organic Compounds by Gas Chromatography/Mass Spectrometry) or any other alternative test methods approved by the USEPA, CARB, and the District.

(2) 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.

(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 average workroom draft rate shall be done parallel to the plane of the degreaser opening using a thermistor anemometer, with an accuracy within ±2 feet per minute, and a calibration traceable to the National Institute of Standards and Technology.

(5) Maximum hoist speed shall be measured with use of a stop clock and distance traveled by the hoist.

(6) Temperatures in the vapor zone shall be measured with the use of a temperature probe.

(7) Determination of Efficiency of Emission Control System

(A) The capture efficiency of an emission control system shall be determined by verifying the use of a Permanent Total Enclosure (PTE) and 100% capture efficiency as defined by USEPA Method 204, "Criteria for and Verification of a Permanent or Temporary Total Enclosure." Alternatively, if a USEPA Method 204 defined PTE is not employed, capture efficiency shall be determined using a minimum of three sampling runs subject to data quality criteria presented in the USEPA technical guidance document "Guidelines for Determining Capture Efficiency, January 9, 1995." Individual capture efficiency test runs subject to the USEPA technical guidelines shall be determined by:

(i) The Temporary Total Enclosure (TTE) approach of USEPA Methods 204 through 204F; or

(ii) The District "Protocol for Determination of Volatile Organic Compounds (VOC) Capture Efficiency."

(B) The control equipment efficiency of an emission control system as specified in subparagraph (k)(1)(D), on a mass emissions basis, and the VOC concentrations in the exhaust gases, measured and calculated as carbon, shall be determined by USEPA 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. USEPA Test Method 18, or

CARB Method 422 shall be used to determine emissions of exempt compounds.

(i) Monitoring, Recordkeeping, and Reporting

(1) A person owning or operating any open-top vapor degreaser or airless/air-tight cleaning system with a VOC-containing solvent shall record at monthly intervals the following information in a format which will provide all the data shown in Attachment A:

(A) the weight, in pounds, of VOCs added to the degreaser in the calendar month (W_a);

(B) the weight, in pounds, of VOCs removed from the degreaser in the calendar month (W_b);

(C) the weight, in pounds, of VOCs contained in the solid waste removed from the degreaser in the calendar month (W_c); and

(D) the monthly emissions (E) determined by the following equation:

$$E = W_a - W_b - W_c.$$

In lieu of test data, the VOCs contained in the solid waste (W_c) may be calculated as 50% of the weight (in pounds) of the solid waste material removed from the degreasers.

The monthly record shall also include:

(i) the SCAQMD permit number, or serial/identification number for the degreaser;

(ii) the product name of the cleaning material;

(iii) the VOC content of the cleaning material; and

(iv) the boiling point of the cleaning material.

Records shall be retained for a period of at least two years, and be made available to the Executive Officer upon request.

(2) A person using a NESHAP halogenated solvent shall comply with the recordkeeping provisions identified in the most recent version of 40 CFR Part 63, Subpart T - National Emission Standards for Halogenated Solvent Cleaning (Section 63.467).

(j) General Prohibitions

A person shall not perform solvent degreasing operations, subject to the provisions of this rule, with HCFC-141b (1,1-dichloro-1-fluoroethane) which is

listed as a Group I exempt compound in Rule 102, or with any other solvent prohibited for use in solvent degreasing operations by the USEPA.

(k) Exemptions

(1) The provisions of this rule shall not apply to:

(A) Prior to January 1, 2006, vapor degreasers using cleaning materials that contain 50 g/l of VOC or less, as used, with no NESHAP halogenated solvents, where the VOC content is determined according to test methods specified in paragraph (h)(1).

(B) Effective January 1, 2006, vapor degreasers using cleaning materials that contain 25 g/l of VOC or less, as used, with no NESHAP halogenated solvents, where the VOC content is determined according to test methods specified in paragraph (h)(1).

(C) Batch-loaded cold cleaners and vapor degreasers, until June 1, 2005, with open-top surface areas less than 1.0 square foot (0.1 square meter), or with a capacity of less than 2 gallons, provided:

(i) the equipment is used only for electrical, high precision optics or electronics applications; or aerospace and military applications for cleaning solar cells, laser hardware, space vehicle components, fluid systems; or components used solely in research and development programs, or laboratory tests in quality assurance laboratories;

(ii) solvent usage is less than five (5.0) gallons per calendar month, and after January 1, 2003, contains no NESHAP halogenated solvents;

(iii) the equipment is operated in compliance with the applicable work practice requirements of paragraphs (c)(1) or (c)(2), except for subparagraphs (c)(1)(E) and (J) or (c)(2)(F); and

(iv) the operator meets the requirements for Monitoring, Recordkeeping, and Reporting of subdivision (i).

(D) After June 1, 2005, batch loaded cold cleaners or vapor degreasers, with open-top surface area less than 1.0 square foot (0.1 square meter) or with a capacity of less than 2 gallons, that are vented to a VOC emission collection and control system provided:

(i) the equipment is used only for cleaning high-precision optics, electrical or electronic components; or aerospace and military applications for cleaning solar cells, laser hardware, fluid systems, and space vehicle components; and

(ii) the emission collection and control system shall collect at least 90 percent, by weight, of the emissions generated by the degreasing operation and have a destruction efficiency of at least 95 percent, by weight, as determined pursuant to (h)(7); and

(iii) no NESHAP halogenated solvents are used; and

(iv) the equipment is operated in accordance with the applicable work practice requirements of paragraphs (c)(1) or (c)(2), excluding respectively subparagraphs (c)(1)(E), (J) and (K), and (c)(2)(D), (E), (F) and (N); and

(v) the operator meets the Monitoring, Recordkeeping, and Reporting requirements of subdivision (i).

(E) After June 1, 2005, batch loaded cold cleaners or vapor degreasers, with open-top surface area less than 1.0 square foot (0.1 square meter) or with a capacity of less than 2 gallons, provided:

(i) the equipment is used only for cleaning electronic components that are designed to travel over 100 miles above the earth's surface; and

(ii) the VOC emissions from all of the equipment do not exceed 22 pounds per month per facility, and no NESHAP halogenated solvents are used. However, for two or more facilities that consolidate at least 65% of each of their total VOC emissions from all of their equipment subject to this exemption to one consolidated facility, the VOC limit may be increased to 44 pounds total per month for the two consolidating facilities, or to 88 pounds total per month for three or more consolidating facilities until January 1, 2007 and to 66 pounds total per month thereafter, provided the following conditions are met:

(I) demonstrate to the satisfaction of the Executive Officer that the facilities whose monthly emission

limits are being transferred are under common ownership with the consolidated facility;

(II) that any applicable permits for the equipment being consolidated have been cancelled; and

(III) written concurrence of the 65% or more consolidation is obtained from the Executive Officer specifying the applicable VOC emission limit in (k)(1)(E)(ii) for the consolidating facilities.

The combined VOC emissions from the facilities involved in the consolidation process cannot exceed the applicable monthly emission limits provided in (k)(1)(E)(ii) for the consolidating facilities.

(F) After June 1, 2005, batch loaded cold cleaners or vapor degreasers, with open-top surface area less than 1.0 square foot (0.1 square meter) or with a capacity of less than 2 gallons, that are used solely for research and development programs, or laboratory tests in quality assurance laboratories, provided no NESHAP halogenated solvents are used.

(G) Motion picture film cleaning equipment.

(H) Until December 31, 2008, the cleaning of photocurable resins from stereolithography equipment and models provided no NESHAP halogenated solvents are used.

(I) Cleaning of medical devices.

(2) The provision of paragraph (e)(3) of this rule shall not apply to vapor degreasers containing VOC materials provided:

(A) the equipment is used only for cleaning electronic components that are designed to travel over 100 miles above the earth's surface; and

(B) the VOC emissions from the equipment do not exceed 22 pounds per month per facility, and the equipment contains no NESHAP halogenated solvent; and

(C) the Executive Officer has approved permit applications demonstrating that the requirements of subparagraphs (k)(2)(A) and (k)(2)(B) are met.

ATTACHMENT A

RECORDKEEPING FORMS

Form A: Equipment and Material Information

AQMD Permit No. If Applicable	**Identification No.**	**Name of Degreasing Material**
Manufacturer of Material	**Supplier of Material**	**VOC Content of Material (gm/l or lb/gal)**
VOC of Concentrate (g/l or lb/gal)	**Diluted (As Used) VOC Content (gm/l or lb/gal)**	**Boiling Point of the Material if Used in a Vapor Degreaser (degrees F or degrees C)**

Form B: Monthly Emissions Determination

Year	Name of Degreasing or Drying Solvent	W_a (lbs)	W_b (lbs)	W_c (lbs)	Monthly Emissions $(W_a - W_b - W_c)$
January					
February					
March					
April					
May					
June					
July					
August					
September					
October					
November					
December					

(W_a) = Weight in pounds, of the VOCs added during any one calendar-month

(W_b) = Weight in pounds, of the VOCs removed from the degreaser or drying device, during the calendar-month

(W_c) = Weight in pounds, of the VOCs in the solid waste removed from the degreaser or drying device, during the calendar-month

(W_a), (W_b) = (Volume Used) x (VOC content, as Used)

(W_c) = Provided by hazardous waste hauler as the difference between the total weight of hazardous waste and the weight of the soil content or may be calculated as50% of the weight (in pounds) of the solid waste removed from the degreaser.

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

(Adopted May 4, 1979)(Amended April 4, 1980)(Amended Dec. 7 1990)

RULE 1123. REFINERY PROCESS TURNAROUNDS

(a) Definition

For the purpose of this rule, the following definition shall apply.

VESSEL means any container or structural envelope in which materials are processed or treated; it does not include any container whose principal purpose is material storage.

(b) Requirements

1. During refinery process turnaround, a person shall not depressurize any vessel containing organic materials unless the vapors released from the vessel are collected and contained for use as fuel or sent to a gas disposal system until the pressure in the vessel is below five pounds per square inch, gauge, or is within ten percent above the minimum gauge pressure at which the vapors can be collected, whichever is lower.
2. For every refinery that uses inert gas displacement or vacuum eduction for process turnaround, a person operating the refinery shall submit to the Executive Officer a plan which describes at least the following:

   (A) the procedure used for gas displacement or eduction;

   (B) the disposition of the displaced or educed organic gases;

   (C) the stage in the displacement or eduction procedure at which the disposition is changed from a control facility to atmospheric venting, and

   (D) the criteria by which said stage is identifiable.

3. The Executive Officer shall approve the plan upon his determination that it provides for the maximum feasible control of emissions of displaced or educed organic gases without causing damage to equipment, malfunction of pollution control or safety devices, or violations of safety regulations and without installation or structural modification equipment which is not needed to comply with subparagraph (b)(1) of this rule.
4. After approval of a plan, all displacement operations shall be conducted according to said plan unless another specifically approved plan is used.

(c) Recordkeeping

A refinery operator shall maintain a record of each refinery process unit turnaround containing at a minimum the date the unit was shut down, the approximate vessel hydrocarbon concentration when hydrocarbons were first discharged into the atmosphere, and the approximate amount of hydrocarbons emitted into the atmosphere. Such records shall be kept at the facility for at least two years, and shall be made available to District staff upon request.

(d) Exemptions

Any vessel, or group of vessels, that has been depressurized to less than five pounds per square inch, gauge, shall be exempted from the provisions of subparagraph (b)(2) by the Executive Officer upon determination by the Executive Officer that the use of existing control facilities to comply with subparagraph (b)(2) is likely to damage equipment, cause the malfunction of pollution control or safety devices, or cause violations of safety regulations.

(Adopted July 6, 1979)(Amended May 7, 1982)(Amended January 6, 1984)
(Amended June 1, 1984)(Amended January 9, 1987)(Amended February 6, 1987)
(Amended April 3, 1987)(Amended May 5, 1989)(Amended March 2, 1990)
(Amended April 6, 1990)(Amended June 1, 1990)(Amended November 2, 1990)
(Amended December 7, 1990)(Amended August 2, 1991)(Amended March 6, 1992)
(Amended December 4, 1992)(Amended December 10, 1993)
(Amended January 13, 1995)(Amended Dec. 13, 1996)(Amended September 21, 2001)

RULE 1124. AEROSPACE ASSEMBLY AND COMPONENT MANUFACTURING OPERATIONS

(a) Purpose and Applicability

The purpose of Rule 1124 is to reduce volatile organic compound (VOC) emissions from aerospace assembly and component manufacturing operations. This rule applies to any operation associated with manufacturing and assembling products for aircraft and space vehicles for which an aerospace material is used. The affected industries include commercial and military aircraft, satellite, space shuttle and rocket manufacturers and their subcontractors. The 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) ADHESION PROMOTER is a primer that is used to promote wetting and form a chemical bond with a subsequently applied sealant or other elastomer.

(2) ADHESIVE is any substance that is used to bond one surface to another surface by attachment

(3) ADHESIVE BONDING PRIMER is a primer that is applied to an aerospace component to increase adhesive or adhesive film bond strength. Adhesive bonding primers are of two types: those that cure at or below 250°F and those that cure above 250°F.

(4) AEROSOL COATING PRODUCT is 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.

(5) AEROSPACE COMPONENT is 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.

(6) AEROSPACE MATERIAL is 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. For the purposes of this rule material shall mean aerospace material.

(7) AIRCRAFT is 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.

(8) ANTICHAFE COATING is a coating applied to areas of moving aerospace components which may rub during normal operation.

(9) ANTI-WICKING WIRE COATING is the outer coating of a wire which prevents fluid wicking into insulation of the wire.

(10) BARRIER COATING is a coating applied in a thin film to fasteners to inhibit dissimilar metal corrosion and to prevent galling.

(11) CHEMICAL MILLING is the removal of metal by chemical action of acids or alkalis.

(12) CLEAR TOPCOAT is a topcoat that contains no visible pigments and is uniformly transparent when applied.

(13) COATING APPLICATION EQUIPMENT is 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.

(14) CONFORMAL COATING is a coating applied to electrical conductors and circuit boards to protect them against electrical discharge damage and/or corrosion.

(15) DRY LUBRICATIVE MATERIALS are 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.

(16) ELECTRIC- or RADIATION-EFFECT COATINGS include electrically conductive coatings and radiation effect coatings, the uses of which may include prevention of radar detection.

(17) ELECTRONIC WIRE COATING is the outer electrical insulation coating applied to tape insulation of a wire specifically formulated to smooth and fill edges.

(18) ELECTROSTATIC DISCHARGE PROTECTION COATING is a coating applied to space vehicles, missiles, aircraft radomes, and helicopter blades to disperse static energy.

(19) EPOXY BASED FUEL-TANK COATING is a coating which contains epoxy resin that is applied to a fuel tank of an aircraft to protect it from corrosion and/or bacterial growth.

(20) EXEMPT COMPOUNDS: As defined in Rule 102.

(21) FACILITY is all the buildings, equipment and materials on one contiguous piece of property.

(22) FASTENER MANUFACTURER is a facility that coats aircraft fasteners, such as pins, collars, bolts, nuts, and rivets, with solid-film lubricants for distribution to other facilities.

(23) FIRE-RESISTANT COATING is a cabin interior coating that meets for civilian aircraft the Federal Aviation Administration-required Ohio State University Heat Release, Fire and Burn Tests; for military aircraft, Aircraft Structural Integrity Program in MIL-STD-1530A and MIL-A-87221 (Northrop's MS-445-3.3.2.1 and MS-445-3.3.2.2).

(24) FLIGHT-TEST COATING is 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.

(25) FUEL-TANK ADHESIVE is an adhesive used to bond components exposed to fuel and must be compatible with fuel-tank coatings.

(26) FUEL-TANK COATING is a coating applied to a fuel tank of an aircraft to protect it from corrosion and/or bacterial growth.

(27) 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:	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

For aerospace materials 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:	Ws	=	weight of volatile compounds evolved during curing and analysis, in grams
	Ww	=	weight of water evolved during curing and analysis, in grams
	Wes	=	weight of exempt compounds evolved during curing and analysis, in grams
	Vm	=	volume of the material prior to reaction, in liters
	Vw	=	volume of water evolved during curing and analysis, in liters
	Ves	=	volume of exempt compounds evolved during curing and analysis, in liters

(28) 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:	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

(29) HAND APPLICATION METHOD is the application of materials by manually held, non-mechanically operated equipment. Such equipment includes paint brushes, hand rollers, caulking guns, trowels, spatulas, syringe daubers, rags, and sponges.

(30) HIGH-TEMPERATURE COATING is a coating that must withstand temperatures of more than 350oF.

(31) HIGH-VOLUME, LOW-PRESSURE (HVLP) SPRAY is a material application system which is operated at air pressure of between 0.1 and 10 pounds per square inch gauge (psig).

(32) IMPACT-RESISTANT COATING is 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.

(33) LINE-SEALER MASKANT is a maskant used to cover scribe lines in maskant in order to protect against etchant in multi-step etching processing.

(34) LONG TERM PRIMER (METAL TO STRUCTURAL CORE BONDING) is an adhesive bonding primer that has met the aircraft manufacturers' required performance characteristics following 6000 hours testing, used for metal to structural core bonding, and with an adhesive that is specified to be cured at 350oF ± 10°F.

(35) LOW-SOLIDS ADHESIVE, COATING, PRIMER OR SEALANT is 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 110oC for one hour.

(36) LOW-SOLIDS CORROSION RESISTANT PRIMER is a corrosion resistant polyurethane compatible primer with enhanced adhesion and rain erosion resistance which contains no more than 45 percent solids, by weight, as applied.

(37) MASKANT FOR CHEMICAL MILLING is a coating applied directly to an aerospace component to protect surface areas when chemical milling the component.

(38) MASKANT FOR CHEMICAL PROCESSING is 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.

(39) METALLIZED EPOXY COATING is a coating that contains relatively large quantities of flake pigmentation for appearance and/or added protection.

(40) MOLD RELEASE COATING is a coating applied to the surface of a mold to prevent the molded component from sticking to the mold as it is removed.

(41) NON-STRUCTURAL ADHESIVE is an adhesive that bonds non-load-carrying aircraft components in non-critical applications and is not covered in any other specialty adhesive categories.

(42) OPTICAL ANTI-REFLECTION COATING is 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.

(43) PHOTOLITHOGRAPHIC MASKANT is 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.

(44) PHOTORESIST OPERATION is 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.

(45) PRETREATMENT PRIMER is a primer which contains no more than 12 percent solids by weight, and at least ½-percent acid by weight, to provide surface etching and is applied directly to metal surfaces to provide corrosion resistance, adhesion, and ease of stripping.

(46) PRIMER is 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.

(47) PRIMER COMPATIBLE WITH RAIN EROSION RESISTANT COATING is a primer to which rain erosion resistant topcoat is applied.

(48) RAIN EROSION-RESISTANT COATING is a coating that protects leading edges, flaps, stabilizers, and engine inlet lips against erosion caused by rain impact during flight.

(49) REPAIR COATING is a coating used to recoat portions of a product which has sustained mechanical damage to the coating following normal painting operations.

(50) REMANUFACTURED AIRCRAFT PARTS are aerospace components that are built as spare parts or replacement parts subject to an existing commercial aircraft specification.

(51) REPAIR MASKANT is a maskant used to cover imperfections in the maskant coat.

(52) REWORK is the inspection, repair, and reconditioning of aerospace components subject to this rule.

(53) RUBBER SOLUTION FUEL-TANK COATING is a fuel-tank coating which performs as a sealant and protects the tank from corrosion and/or bacterial growth and is formulated with a butadiene acrylonitrile copolymer.

(54) SCALE INHIBITOR is a coating that is applied to the surface of a part prior to thermal processing to inhibit the formation of tenacious scale.

(55) SEALANTS are viscous semisolid materials that fill voids in order to seal out water, fuel, and other liquids and solids, and in some cases, air movement.

(56) SHORT TERM PRIMER (METAL TO STRUCTURAL CORE BONDING) is an adhesive bonding primer that has met the manufacturers' required performance characteristics following 1000 hours testing, used for metal to metal and metal to structural core bonding, and with an adhesive which is specified to be cured at a temperature of 350°F ± 10°F.

(57) SOLID-FILM LUBRICANT is 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.

(58) SONIC AND ACOUSTIC APPLICATIONS are the use of aerospace materials on aerospace components that are subject to mechanical vibration and/or sound wave cavitation.

(59) SPACE-VEHICLE is a vehicle designed to travel beyond the earth's atmosphere.

(60) STENCIL COATING is an ink or a coating that is rolled, sprayed with an airbrush or a touch-up gun, or brushed, while using a template to add identifying letters and/or numbers to aerospace components.

(61) STRIPPER is a volatile liquid applied to remove cured aerospace materials or their residues.

(62) STRUCTURAL ADHESIVE - AUTOCLAVABLE is an adhesive used to bond load-carrying aircraft components and is cured by heat and pressure in an autoclave.

(63) STRUCTURAL ADHESIVE - NON-AUTOCLAVABLE is 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.

(64) TEMPORARY MARKING COATING is an ink or a coating used to make identifying markings, and is removed prior to delivery of the aerospace component and/or assembly.

(65) TEMPORARY PROTECTIVE COATING is a coating applied to an aerospace component to protect it from mechanical and environmental damage during manufacturing.

(66) TOPCOAT is a coating applied over a primer for purposes such as appearance, identification, or protection.

(67) TOUCH-UP COATING is a coating used to cover minor coating imperfections appearing after the main coating operation.

(68) TOXICITY-WEIGHTED EMISSION REDUCTION EFFICIENCY is the difference between the uncontrolled and the controlled toxicity-weighted total emissions divided by the uncontrolled toxicity-weighted total emissions and multiplied by 100. Toxic organic solvent and toxic particulate matter toxicity-weighted emission reduction efficiencies are calculated separately and are represented by the following equation:

$$h = \frac{T_u - T_c}{T_u} \quad x \quad 100$$

Where: η = The toxicity-weighted emission reduction efficiency

T_u = The uncontrolled toxicity-weighted total emissions

T_c = The controlled toxicity-weighted total emissions

(69) TOXICITY-WEIGHTED TOTAL EMISSIONS is the sum of the product of the mass emissions and the unit risk factor for each toxic component of aerospace material used per year. There are two toxicity-weighted total emission values, one for uncontrolled emissions and the other for controlled emissions. Toxicity-weighted total emissions for toxic organic solvents and toxic particulate matter are calculated separately and are represented by the following equations:

$$T_u = \sum_{i=1}^{n} m_i U_i$$

$$T_c = \sum_{i=1}^{n} (1 - E_i)(m_i U_i) + \sum_{j=1}^{m} (1 - E_j)(m_j U_j)$$

Where: T_u = The uncontrolled toxicity-weighted total emissions

T_c = The controlled toxicity-weighted total emissions

m_i = Baseline mass emissions of each toxic organic solvent or toxic particulate matter as established in a District approved Health Risk Assessment in pounds per year

U_i Unit risk factor for each toxic organic solvent or toxic particulate matter in inverse micrograms per cubic meter $(\mu g/m^3)^{-1}$

E_i Overall control efficiency of the add-on control equipment for which aerospace materials containing toxic organic solvent or toxic particulate matter are vented to

m_j Additional mass emissions of each toxic organic solvent or toxic particulate matter to the baseline mass emissions that established a District approved Health Risk Assessment in pounds per year

U_j Unit risk factor for each toxic organic solvent or toxic particulate matter in inverse micrograms per cubic meter $(\mu g/m^3)^{-1}$

E_j Overall control efficiency of the add-on control equipment for which additional aerospace materials containing toxic organic solvent or toxic particulate matter will be vented to

(70) TOXIC ORGANIC SOLVENT is any volatile compound that has a finalized unit risk factor assigned by the Office of Environmental Health Hazard Assessment.

(71) TOXIC PARTICULATE MATTER is any non-volatile compound that has a finalized unit risk factor assigned by the Office of Environmental Health Hazard Assessment.

(72) 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.

(73) TYPE I ETCHANT is a chemical milling etchant that contains varying amounts of dissolved sulfur and does not contain amines.

(74) TYPE II ETCHANT is a chemical milling etchant that is a strong sodium hydroxide solution containing amines.

(75) UNICOAT is 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.

(76) 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:

$$PP_c = \sum_{i=1}^{n} \frac{\frac{W_i}{MW_i} \times VP_i}{\frac{W_w}{MW_w} + \frac{W_e}{MW_e} + \sum_{i=1}^{n} \frac{W_i}{MW_i}}$$

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_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^oC, in mm Hg
Vp_i	=	Vapor pressure of the "i"th VOC compound at 20^oC, in mm Hg

(77) VOLATILE ORGANIC COMPOUND (VOC) is as defined in Rule 102.

(78) WING COATING is a corrosion-resistant coating that is resilient enough to withstand the flexing of the wings.

(79) WIRE INK is the surface identification stripe and mark on aerospace wire or cable that serves as an electrical insulator in the presence of high humidity.

(80) WIRE PREBONDING ETCHANT is a non-additive surface treatment process to provide bondability of aerospace wire coatings to the underlying insulation layer.

(c) Requirements

(1) VOC Content of Aerospace Materials

(A) A person shall not apply to aerospace components any materials, including any VOC-containing materials added to the original material supplied by the manufacturer, which contain VOC in excess of the limits specified below:

VOC Limit Grams of VOC per Liter, Less Water and Less Exempt Compounds			
Primers	**Current VOC Limit**	**VOC Limit Effective 1-1-03**	**VOC Limit Effective 1-1-05**
General Primer	350	350	350
Low-Solids Corrosion Resistant Primer	350	350	350
Pretreatment Primer	780	780	780
Rain Erosion-Resistant Coating Compatible Primer	850	850	850
Adhesion Promoter	850	850	250
Adhesive Bonding Primer			
New Commercial Aircraft	805	250	250
All Military Aircraft	805	805	805
Remanufactured Commercial Aircraft Parts	805	805	805
Sonic and Acoustic Applications	805	805	805
Adhesive Bonding Primer			
Long Term	250	250	250
Short Term	250	250	250

Coatings	**Current VOC Limit**	**VOC Limit Effective 3-01-02**
Topcoat	420	420
Clear Topcoat	520	520
Unicoat	420	420
Wing Coating	750	750
Impact Resistant Coating	420	420
High-Temperature Coating	850	850
Antichafe Coating	600	420
Rain Erosion-Resistant Coating	800	800
Conformal Coating	750	750
Optical Anti-Reflective Coating	700	700
Scale Inhibitor	880	880
Metallized Epoxy Coating	700	700

Coatings (cont'd)	**Current VOC Limit**	**VOC Limit Effective 3-01-02**
Electric or Radiation Effect Coating	800	800
Temporary Protective Coating	250	250
Fuel Tank Coatings	420	420
Mold Release Coatings	780	780
Flight Test Coatings		
Used on Missiles or Single Use Target Craft	420	420
All Other	840	840
Fire Resistant Coatings		
Commercial	650	650
Military	970	800
Wire Coatings		
Phosphate Ester Resistant Ink	925	925
Other	420	420
Space Vehicle Coatings		
Electrostatic Discharge Protection Coating	800	800
Other	1000	1000

Adhesives	**Current VOC Limit**
Non-Structural Adhesive	250
Structural Adhesive	
Autoclavable	50
Non-Autoclavable	850
Space Vehicle Adhesive	800
Fuel Tank Adhesive	620

Sealants	**Current VOC Limit**	**VOC Limit Effective 3-01-02**
Fastener Sealant	675	675
Extrudable,Rollable or Brushable Sealant	600	280
Other	600	600

Maskants	Current VOC Limit
For Chemical Processing	250
For Chemical Milling	
Type I	250
Type II	160
Photolithographic	850
Touch-up, Line Sealer Maskants	750

Lubricants	Current VOC Limit
Fastener Installation	
Solid-Film Lubricant	880
Dry Lubricative Materials	675
Fastener-Lubricative Coatings, Fastener Manufacturing	
Solid Film Lubricant	250
Dry Lubricative Materials	120
Barrier Coating	420
Non-Fastener Lubricative Coatings, Fastener Manufacturing	
Solid Film Lubricant	880
Dry Lubricative Materials	675

VOC LIMIT Grams of VOC per Liter of Material	
Cleaning Solvents and Strippers	**Current VOC Limit**
Cleaning Solvents	200 g/L or 45 mm Hg VOC Composite Partial Pressure
Strippers	300 g/L or 9.5 mm Hg VOC Composite Partial Pressure

(B) Documents shall be provided to the Executive Officer or his designee demonstrating that 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 unicoat specifying the conditions of application from the Executive Officer or his designee.

(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 Cleaning Operations; Storage and Disposal of VOC-Containing Materials

(A) Cleaning of material application equipment and storage of solvent laden cloth and paper shall comply with provisions of Rule 1171.

(B) A person shall not atomize any solvent into open air.

(3) Transfer Efficiency

A person or facility shall not apply aerospace materials unless they are applied with properly operating equipment or controlled, according to operating procedure specified by the equipment manufacturer or the Executive Officer or his designee, 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) high-volume, low-pressure (HVLP) spray; or

(F) hand application methods; or

(G) such other alternative application methods as are demonstrated to the Executive Officer, using District-approved procedures, to be capable of achieving at least equivalent transfer efficiency to method (c)(3)(E) and for which written approval of the Executive Officer has been obtained; or

(H) Approved air pollution control equipment under paragraph (c)(4).

(4) Control Equipment

Owners and/or operators may comply with provisions of paragraphs (c)(1) and (c)(3) 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).

(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 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) Recordkeeping Requirements

Records shall be maintained pursuant to the requirements of Rule 109.

(e) Determination of VOC Content

The VOC content of materials subject to the provisions of this rule shall be determined by the following methods:

(1) 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). Analysis done according to EPA Method 24 shall utilize Procedure B of ASTM Method D-2369, referenced in EPA 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) or;

(2) SCAQMD Test Methods 302, 303, and 304 (SCAQMD "Laboratory Methods of Analysis for Enforcement Samples" manual).

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) Test Methods

(1) Efficiency of the control device shall be determined according to EPA Method 25, 25A, SCAQMD Test Method 25.1, or SCAQMD Test Method 25.3. 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.

(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 or any other method approved by the USEPA, the California Air Resources Board, and the SCAQMD.

(3) The transfer efficiency of alternative application methods shall be determined in accordance with the SCAQMD method "Spray Equipment Transfer Efficiency Test Procedure for Equipment User, May 24, 1989".

(4) The identity and quantity of components in solvents shall be determined in accordance with SCAQMD test 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 the equation in paragraph (b)(72).

(5) 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.

(6) All test methods shall be those referenced in this section or any other applicable method approved by the USEPA, the California Air Resources Board, and the SCAQMD.

(g) Rule 442 Applicability

Any material, operation, or facility which is exempt from all or a portion of this rule, shall comply with the provisions of Rule 442.

(h) Prohibition of Solicitation of Violations

(1) A person shall not solicit or require any other person to use, in the District, any material or combination of 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 subdivision (i).

(2) The requirements of this paragraph shall apply to all written or oral agreements executed or entered into after April 3, 1987.

(i) Alternative Emission Control Plans

An owner/operator may comply with the provisions of paragraph (c)(1) by means of an Alternative Emission Control Plan pursuant to Rule 108.

(j) Reporting Requirements

Persons who perform qualification acceptance testing on materials with a future compliance date for use in the District shall, beginning July 1, 1994 and at 6-month intervals thereafter, submit a status report describing the progress toward the development of materials which satisfy future compliance dates. These reports shall contain, at a minimum:

(1) Manufacturer, product number, VOC content, and applicable material category for each of the test candidates;

(2) Test expenditures for the period;

(3) Progress on candidates tested during this period.

(4) Approvals received for materials which comply with future compliance dates.

(5) Volume of materials used in each material category for which there is a future compliance date.

Facilities testing materials in the same material 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.

(k) Air Toxics

In lieu of complying with subdivisions (e), (f), (h), and (i) of Rule 1402 - Control of Toxic Air Contaminants from Existing Sources, a facility may submit a compliance plan to the District for the Executive Officer's approval within 180 days from the date of Health Risk Assessment approval that demonstrates how a toxicity-weighted emissions reduction efficiency of at least 90.0 percent for toxic organic solvents and at least 99.0 percent for toxic particulate matter emissions has been achieved and will be maintained in the future.

(l) Exemptions

(1) The provisions of paragraph (c)(1) of this rule shall not apply to materials, exclusive of adhesives, with separate formulations that are used in volumes of less than 20 gallons per year provided that the total of such formulations applied annually by 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 gallons of VOC-containing materials on each and every day of operation.

(3) The provisions of paragraphs (c)(1) and (c)(3) 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 gallons per day.

(4) The VOC limits for solvents and strippers 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)(3) shall not apply to touch-up and stencil coatings.

(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 gallons per year.

(9) The provisions of paragraph (c)(3) shall not be applied to the application of materials marking coatings.

(10) The provisions of subdivision (c) shall not apply to laboratories which apply materials to test specimens for purposes of research, development, quality control, and testing for production-related operations.

(11) The provisions of subdivision (c) shall not apply to the application of temporary marking coatings.

(12) The VOC limits for solvents shall not apply to the surface cleaning of solar cells, fluid systems, avionic equipment, and laser optics.

(13) The provisions of subdivision (d) and paragraph (c)(3) shall not apply to the application of materials that contain less than 20 g/L of VOC per liter of material.

(14) The provisions of paragraph (c)(3) shall not apply to the use of materials dispensed from airbrush operations.

(15) The provisions of this rule shall not apply to aerosol coating products.

(16) Until January 1, 2005, the VOC limit for fuel tank coatings shall not apply to non-spray rubber solution fuel-tank coating, containing less than 710 g/L of VOC per liter of coating, used on fuel tanks with maximum capacity of 35 gallons and where the total facilitywide usage of this coating is less than 150 gallons per year. Records shall be maintained pursuant to the requirements of Rule 109 to establish eligibility for this exemption.

(Adopted April 6, 1979)(Amended January 8, 1982)(Amended December 7, 1984)
(Amended January 10, 1986)(Amended May 5, 1989)(Amended December 1, 1989)
(Amended March 2, 1990)(Amended November 2, 1990)(Amended December 7, 1990)
(Amended August 2, 1991)(Amended January 13, 1995)(March 7, 2008)

AMENDED RULE 1125. METAL CONTAINER, CLOSURE, AND COIL COATING OPERATIONS

(a) Applicability

This rule applies to all coating operations in the manufacturing and/or reconditioning of metal cans, drums, pails, lids, and closures. It also includes coating of the surface of flat metal sheets, strips, rolls, or coils during the manufacturing and/or reconditioning of metal containers, closures, and coils.

(b) Definitions

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

(1) AEROSOL COATING PRODUCT is a pressurized coating product containing pigments or resins that are dispensed by means of a propellant, and are packaged in a disposable can for hand-held application.

(2) CLOSURE is any component which is used to close or seal a filled can, jar, or bottle.

(3) COATING APPLICATOR is any apparatus used to apply a surface coating.

(4) COATING LINE is any operation or process for applying, drying, or baking and/or curing surface coatings, together with associated equipment, such as a coating applicator, flash-off area, and oven.

(5) COIL is any flat metal sheet or strip that is rolled or wound in concentric rings.

(6) DRUM is any cylindrical metal shipping container larger than 12 gallons capacity but no larger than 110 gallons capacity.

(7) END SEALING COMPOUND is any compound which is applied to the can ends of a metal container and/or cover, and which functions as a gasket when the end is assembled.

(8) EXEMPT COMPOUNDS: are as defined in Rule 102-Definition of Terms.

(9) EXTERIOR BASE COATING is any coating applied to the exterior of a can body, end, or flat sheet to provide protection to the metal or to provide background for any subsequent printing operation.

(10) EXTERIOR END COATING is a coating applied to the exterior end of a can to provide protection to the metal.

(11) FOOD/BEVERAGE CAN is any metal container intended for packaging food or beverages.

(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 =

$$\frac{W_s - W_w - W_{es}}{V_m - V_w - V_{es}}$$

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

(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:

$$\text{Grams of VOC per Liter of Material} = \frac{W_s - W_w - W_{es}}{V_m}$$

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

(14) HAND APPLICATION METHOD is the application of coatings using manually held, non-automatic equipment. Examples of this method include, but are not limited to, application by paint brush, hand roller, trowel, spatula, dauber, rag, and sponge.

(15) HIGH-VOLUME, LOW-PRESSURE (HVLP) SPRAY is a coating application system which is designed to be operated at air pressures between 0.1 and 10.0 pounds per square inch gauge (psig) at the air cap of the spray gun.

(16) INK is any coating used in any operation that imparts color, design, alphabet, or numerals on an exterior surface of a metal container, closure, or coil.

(17) INKJET INKS are inks used in conjunction with a printing process where images are formed by the precise placement of small (picoliter-sized) droplets of ink fired at high speeds from the nozzle(s) of computer-controlled printheads. For the purposes of this rule, inks used with modular electric spray ink dot equipment shall also be considered as inkjet inks.

(18) INKJET MAKE-UP SOLVENT is a solvent that is added to an inkjet ink after it has been recirculated in a continuous inkjet printing process.

(19) INTERIOR BASE COATING is any coating applied to the interior of a can body, end, or flat sheet to provide a protective lining between the product and the can.

(20) INTERIOR BODY SPRAY is any coating sprayed on the interior of the can body to provide a protective film between the product and the can.

(21) METAL CONTAINER, CLOSURE, AND COIL COATING is any VOC-containing coating applied to the surfaces of metal cans, drums, pails, lids, closures, or to the surface of flat metal sheets, strips, rolls, or coils during the manufacturing and/or reconditioning process.

(22) NECKER LUBRICANT is any fluid or solid lubricant applied to a can forming tool to reduce friction while reducing the can diameter to form a neck.

(23) OVERVARNISH is any coating applied directly over a design coating to reduce the coefficient of friction, to provide gloss, and to protect the finish against abrasion and corrosion.

(24) PAIL is any cylindrical metal shipping container of from 1-gallon to 12-gallon capacity and constructed of 29 gauge or heavier material.

(25) SOLVENT CLEANING OPERATION is the removal of loosely held uncured adhesives, uncured inks, uncured coatings, and contaminants from parts, products, tools, machinery, equipment, and general work areas. Contaminants include, but are not limited to, dirt, soil, and grease. In a cleaning process which consists of a series of cleaning methods, each distinct method shall constitute a separate solvent cleaning operation.

(26) THERMOCHROMIC INK is an ink that changes color when subject to a temperature change.

(27) THREE-PIECE CAN SIDE SEAM SPRAY is any coating sprayed on a welded, cemented, or soldered seam to protect the exposed metal.

(28) VOLATILE ORGANIC COMPOUND (VOC) is as defined in Rule 102-Definition of Terms.

(c) Requirements

(1) Any person shall not use or apply any coating on any coating line of the type designated below which contains any volatile organic compound in excess of the following limits, expressed as grams of VOC per liter of coating or pounds per gallon of coating, less water and less exempt compounds, except for inkjet inks and inkjet make-up solvents, where the referenced VOC limit is expressed as grams of VOC per liter of material or pounds per gallon of material:

COATING CATEGORY	**VOC LIMITS**	
	g/L	Lb/gal
Can Coatings		
Three-Piece Can Sheet Basecoat (Exterior and Interior Overvarnish)	225	1.9
Two-Piece Can Exterior Basecoat and Overvarnish	250	2.1
Can Interior Body Spray		
Two-Piece Can	440	3.7
Three-Piece Can	510	4.2
Three-Piece Can Side Seam Spray	660	5.5
Drums, Pails, and Lids Coatings		
New		
Exterior	340	2.8
Interior	420	3.5
Reconditioned		
Exterior	420	3.5
Interior	510	4.2
Coil Coatings		
Coatings	200	1.7

All Operations		
Necker Lubricants	100	0.8
End Sealing Compounds		
Food/Beverage Cans Effective 7-1-08	440 20	3.7 0.17
Non-Food Containers	0	0
Inks		
Other than Inkjet	300	2.5
Inkjet	250*	2.1*
Thermochromic Inkjet	700*	5.8*
Inkjet Make-Up Solvents		
General Inkjet	250*	2.1*
Thermochromic Inkjet	800*	5.8*

* Different VOC determination method

(2) Any person may comply with the provisions of paragraph (c)(1), and/or (c)(5) by using an emission control system, for reducing VOC emissions which has been approved in writing by the Executive Officer.

(A) The emission control system shall collect at least 90 percent by weight of the emissions generated using USEPA, ARB, and District methods specified in subparagraph (e)(2)(A) and have a destruction efficiency of at least 95 percent by weight, or

(B) The approved system shall reduce the VOC emissions when using non-compliant coatings to an equivalent or greater level that would be achieved by the provisions in paragraph (c)(1). The required efficiency of an emission control system at which an equivalent or greater level of VOC reduction will be achieved shall be calculated by the following equation:

$$C.E. = \left[1 - \left\{ \frac{(VOC_{LWc})}{(VOC_{LWn\,Max})} \times \frac{1 - \left(\frac{VOC_{LWn\,Max}}{D_{n\,Max}} \right)}{1 - \left(\frac{VOC_{LWc}}{D_c} \right)} \right\} \right] \times 100$$

Where:

C.E.	=	Control Efficiency, percent
VOC_{LWc}	=	VOC Limit of Rule 1125, less water and less exempt compounds, pursuant to subdivision (c)
$VOC_{LWn\ Max}$	=	Maximum VOC content of non-compliant coating used in conjunction with a control device, less water and less exempt compounds
$D_{n\ Max}$	=	Density of solvent, reducer, or thinner contained in the non-compliant coating, containing the maximum VOC content of the multicomponent coating
D_c	=	Density of corresponding solvent, reducer, or thinner used in the compliant coating system = 880g/L

(3) Alternative Emission Control Plan

Owners and/or operators may comply with the provisions of paragraph (c)(1) by means of an Alternative Emission Control Plan pursuant to Rule 108.

(4) Transfer Efficiency

A person or facility shall not apply any coating subject to the provisions of this rule unless the coating is 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:

(A) electrostatic application; or

(B) flow coat; or

(C) roll coat; or

(D) dip coat; or

(E) high-volume, low-pressure (HVLP) spray; or

(F) hand application methods; or

(G) printing techniques, such as inkjet printing; or

(H) such other coating application methods as are demonstrated to the Executive Officer to be capable of achieving a transfer efficiency equivalent or better to the method listed in subparagraph (c)(4)(E) and for which written approval of the Executive Officer has been obtained.

(5) Solvent Cleaning Operations; Storage and Disposal of VOC-containing Materials

All solvent cleaning operations and the storage and disposal of VOC-containing materials used in solvent cleaning operations shall be carried out pursuant to Rule 1171 - Solvent Cleaning Operations.

(6) Recordkeeping

Notwithstanding provisions of subdivision (g), records shall be maintained pursuant to Rule 109, except that usage records for complying inks may be grouped by ink categories and each category constitutes a different VOC content.

(d) Prohibition of Specification and Sale

(1) A person shall not solicit or require any other person to use, in the District, any coating or combination of coatings to be applied to any metal container, closure, or coil 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 paragraph (c)(3) of this rule.

(2) The requirements of paragraph (d)(1) shall apply to all written or oral agreements executed, entered into, or renewed including options after December 1, 1989.

(3) A person shall not sell, offer for sale, use, or apply any coating within the district, applied to any metal container, closure, or coil subject to the provisions of this rule, containing the following exempt compounds:

methylene chloride,
trifluoromethane (FC-23),
trichlorotrifluoroethane (CFC-113),
dichlorodifluoromethane (CFC-12),
trichlorofluoromethane (CFC-11),
dichlorotetrafluoroethane (CFC-114), and
chloropentafluoroethane (CFC-115).

(4) A person shall not sell or offer for sale for use within the District any coating which contains volatile organic compounds in excess of the limits specified in this rule for any application governed by this rule unless the label on the product or the data sheets for the product clearly bear the warning that the coating shall not be used unless compliance with the rule can be achieved.

(e) Methods of Analysis

All applicable methods of analysis shall be as cited in paragraphs (e)(1) through (e)(5) below, or any other applicable method approved in writing by the Executive Officer, United States Environmental Protection Agency (U.S. EPA), and the

California Air Resources Board (CARB), provided the approved alternative method is equivalent to those listed below.

(1) The VOC content of coatings subject to the provisions of this rule shall be determined by the following methods:

(A) United States Environmental Protection Agency (U.S. EPA) 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 subdivision (c), only when manufacturers specify which individual compounds are used in the coating formulation. In addition, the manufacturers must identify the U.S. EPA, California Air Resources Board, and the SCAQMD approved test methods used to quantify the amount of each exempt compound.

(2) Determination of Efficiency of Emission Control System

(A) The efficiency of the collection device of the emission control system as specified in paragraph (c)(2) shall be determined by the procedures presented in the U.S. EPA technical guidance document, "Guidelines for Determining Capture Efficiency, January 9, 1995." Notwithstanding the test methods specified by the Guidelines, any other method may be substituted if approved by the Executive Officer, U.S. EPA, and CARB.

(B) The efficiency of the control device of the emission control system as specified in paragraph (c)(2) and the VOC content in the control device exhaust gases, measured and calculated as carbon, shall be determined by U.S. EPA Test Methods 25, 25A, or SCAQMD Test 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. U.S. EPA Test Method 18, or CARB Method 422 shall be used to determine emissions of exempt compounds.

(3) 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".

(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 this rule.

(5) All test methods referenced in this section shall be the most recently approved version.

(f) Rule 442 Applicability

Any metal container, closure, or coil 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 this rule shall not apply to the spray coating of one gallon per day or less of coatings at a single facility.

(2) The provisions of this rule shall not apply to aerosol coating products.

(Adopted February 2, 1979)(Amended January 8, 1982)(Amended May 5, 1989)
(Amended Nov. 2, 1990)(Amended Dec. 7, 1990)(Amended August 2, 1991)
(Amended March 6, 1992)(Amended January 13, 1995)

RULE 1126 - MAGNET WIRE COATING OPERATIONS

(a) Applicability

This rule applies to all coating operations on magnet wire, where the wire is continuously drawn through a coating applicator.

(b) Definitions

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

1. AEROSOL COATING PRODUCT is 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.
2. EXEMPT COMPOUNDS are any of the following compounds:

   (A) Group I

   --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)
   --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 Regulations Title 40, Part 82 (December 10, 1993).

3. 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:

$$\text{Grams of VOC per Liter of Coating, Less Water and Less Exempt Compounds} = \frac{Ws - Ww - Wes}{Vm - Vw - Ves}$$

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

4. MAGNET WIRE is wire used in electro-magnetic field application in electrical equipment, such as transformers, motors, generators, and magnetic tape recorders.
5. MAGNET WIRE COATING OPERATIONS is the application of any coating on magnet wire, where the wire is continuously drawn through a coating applicator.
6. SOLVENT CLEANING OPERATION is the removal of loosely held uncured adhesives, uncured inks, uncured coatings, and contaminants. Contaminants include, but are not limited to, dirt, soil, and grease from parts, products, tools, machinery, equipment, and general work areas. In a cleaning process which consists of a series of cleaning methods, each distinct method shall constitute a separate solvent cleaning operation.
7. VOLATILE ORGANIC COMPOUND (VOC) is defined as 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. Any person shall not use or apply any magnet wire coating which contains more than 200 grams VOC per liter (1.67 lb/gal) of coating less water and less exempt compounds, or
2. Any person applying magnet wire coating may comply with the provisions of paragraph (c)(1) by using an emission control system, for reducing emissions of VOC, which has been approved in writing by the Executive Officer.

   (A) The emission control system shall achieve at least 90 percent overall efficiency by direct incineration at 1499°F or higher, or

   (B) The approved system shall reduce the VOC emissions when using non-compliant coatings to an equivalent or greater level that would be achieved by the provisions in paragraph (c)(1). The required efficiency of an emission control system at which an equivalent or greater level of VOC reduction will be achieved shall be calculated by the following equation:

$$C.E. = \left[1 - \left\{ \frac{(VOC_{LWc})}{(VOC_{LWn\ Max})} \times \frac{1 - (VOC_{LWn\ Max}/D_{n\ Max})}{1 - (VOC_{LWc}/D_c)} \right\} \right] \times 100$$

Where:

C.E. = Control Efficiency, percent

VOC_{LWc} = VOC Limit of Rule 1126, less water and less exempt compounds, pursuant to subdivision (c).

$VOC_{LWn\ Max}$ = Maximum VOC content of non-compliant coating used in conjunction with a control device, less water and less exempt compounds.

$D_{n\ Max}$ = Density of solvent, reducer, or thinner contained in the non-compliant coating, containing the maximum VOC content of the multicomponent coating.

D_c = Density of corresponding solvent, reducer, or thinner used in the compliant coating system = 880g/L.

3. Solvent Cleaning Operations; Storage and Disposal of VOC-Containing Materials

   All solvent cleaning operations and the storage and disposal of VOC-containing materials used in solvent cleaning operations shall be carried out pursuant to Rule 1171 - Solvent Cleaning Operations.

4. Recordkeeping

   Records shall be maintained pursuant to Rule 109.

(d) Test Methods

1. Determination of VOC Content

   The VOC content of coatings subject to the provisions of this rule shall be determined by using:

   (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 Test Method 303 (Determination of Exempt Compounds) contained in the SCAQMD "Laboratory Methods of Analysis for Enforcement Samples" manual; or,

   (B) SCAQMD Test 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)(1) only when manufacturers specify which individual compounds are used in the coating formulation. In addition, the manufacturers shall identify the USEPA, California Air Resources Board, and the SCAQMD approved test methods used to quantify the amount of each exempt compound.

2. Determination of Efficiency of Emission Control System

   (A) The efficiency of the collection device of the emission control system as specified in paragraph (c)(2) 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 paragraph (c)(2) 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.

3. 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.

4. All test methods referenced in this section shall be the most recently approved version.

(e) Exemptions

1. The provisions of paragraphs (c)(1), (c)(2), and (c)(3) shall not apply to:

   (A) Magnet wire coating operations which emit into the atmosphere less than 1 kg (2.2 lbs) per hour, and not more than 5 kg (11 lbs) per day of volatile organic compounds.

   (B) Coating of electrical machinery and equipment sub-assemblies, such as motor housings.

2. The provisions of this rule shall not apply to aerosol coating products.

RULE 1127. EMISSION REDUCTIONS FROM LIVESTOCK WASTE

(a) Purpose

The purpose of this rule is to reduce ammonia, VOC, and PM10 emissions from livestock waste.

(b) Applicability

This rule applies to dairy farms and related operations such as heifer and calf farms and the manure produced on them. It also applies to manure processing operations, such as composting operations and anaerobic digesters.

(c) Definitions

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

(1) ALTERNATIVE MANURE COMPOSTING OPERATION means an in-vessel composting operation that does not meet the requirements of subdivision (d) of Rule 1133.2 and that composts either livestock manure only, or manure and green material amendments only. Biosolids and food waste cannot be used as feedstocks.

(2) ANAEROBIC DIGESTER is a tank or vessel system that excludes oxygen and in which a sludge or liquid effluent is modified by the action of anaerobic bacteria. The remaining solids from the process can be used as a soil amendment or further composted or otherwise processed.

(3) DAIRY FARM is an operation on a property, or set of properties that are contiguous or separated only by a public right-of-way, which is directly related to raising cows or producing milk from cows for the purpose of making a profit or for a livelihood. Heifer and calf farms are included in this definition of dairy farms.

(4) ENGINEERED WASTE MANAGEMENT PLAN is a plan for a wastewater management system that is designed, constructed, operated and maintained to comply with the wastewater containment requirements of the Santa Ana Regional Water Quality Control Board.

(5) EXISTING DAIRY OPERATION is a dairy farm being operated as of (the date of rule adoption).

(6) GREEN MATERIAL means any plant material that is separated at the point of generation and contains no greater than 1.0 percent of physical

contaminants by weight, and meets the requirements of the California Code of Regulations – Title 14, section 17868.5. Green materials includes, but is not limited to, yard trimmings, untreated wood wastes, natural fiber products, and construction and demolition wood waste. Green material does not include food material, biosolids, mixed solid waste, material processes from commingled collection, wood containing lead-based paint or wood preservative, mixed construction or mixed demolition debris.

(6) MANURE PROCESSING OPERATION is an operation that receives manure from livestock operations and processes it for use. Such processing includes, but is not limited to, composting operations producing fertilizer and/or soil amendments, and anaerobic digesters.

(7) OPERATOR is any person, people, or entity that owns or operates a dairy farm or manure processing operation subject to the requirements of this rule.

(d) Best Management Practices

On or after December 1, 2004, a dairy operator shall:

(1) Use one of the following procedures when removing manure from a corral:

(A) Scrape or harrow before 9 am only unless the moisture content of the manure is greater than 20% throughout the corral, as determined by an moisture meter in accordance with paragraph (h)(1); OR

(B) Clear corrals such that an even surface of compacted manure remains on top of the soil and do not scrape down to soil level; OR

(C) Water corral before manure removal to reduce dust through increased surface moisture. This measure is not required for lactating cows.

(2) Minimize excess water in corrals by:

(A) identifying and eliminating water leaks from trough and trough piping; and

(B) complying with corral drainage standards specified in the dairy's Engineered Waste Management Plan.

(3) Pave feedlanes, where present, at least 8 feet on the corral side of the feedlane fence.

(4) Effective January 1, 2005, a dairy operator shall clear any accumulated manure in excess of 3 inches in height in each corral at least 4 times per year with at least 60 days between clearings. The operator of a dairy farm shall keep a record of each clearing.

(5) Effective January 1, 2005, a dairy operator shall remove all on-dairy stockpiles within three months of the last corral clearing day and no more than three months after date that the previous stockpiles were last completely cleared. The operator of the dairy farm shall keep a record of each removal, including date(s) of removal, hauler (if applicable), and manure destination.

(e) Manure Disposal Requirements

(1) Effective January 1, 2006, a dairy operator disposing of manure within jurisdiction of the South Coast Air Quality Management District shall only remove or contract to remove manure from their dairy to:

(A) A manure processing operation that has been approved in accordance with the requirements of subdivision (f); OR

(B) Agricultural land within the South Coast Air Quality Management District approved by local ordinance and/or regional water quality board for the spreading of manure; OR

(C) A combination of destinations in paragraphs (A) and (B).

(f) Rule 1127 Manure Processing Operation (1127 MPO) Approval Requirements

(1) A manure processing operator shall only process manure by one or a combination of the following methods:

(A) An anaerobic digester permitted by the District.

(B) A composting operation registered according to the requirements of Rule 1133 and operating in compliance with Rule 1133.2 subdivision (d).

(C) Alternative manure composting operations registered according to the requirements of Rule 1133 and operating in compliance with the requirements of paragraphs (f)(3) and (f)(4).

(2) Application Submittal and Approval Process

(A) Any person who operates a manure processing operation shall submit an application including the following information:

(i) The name and location address of the operation;

(ii) The name(s), mailing address(es), and phone number(s) of the person(s) responsible for process operations and submittal of the application;

(iii) Registration status, if applicable, in accordance with Rule 1133 requirements;

(iv) A list of AQMD permits and permit status, if applicable;

(v) For alternative manure composting operations, a manure composting compliance plan prepared in accordance with paragraph (f)(3).

(B) After the receipt of a complete application submitted pursuant to subparagraph (f)(2)(A), the Executive Officer will either approve or disapprove the application, in writing, in accordance with paragraph (f)(1).

(C) If the application submitted pursuant to subparagraph (f)(2)(A) is disapproved by the Executive officer:

(i) The reasons for disapproval shall be given to the applicant in writing.

(ii) The applicant may resubmit a compliant application at any time after receiving a disapproval notification.

(D) An approved application shall be valid for a period of three years from the date of approval and may be renewed.

(i) Applications for renewal must be submitted at least 60 days prior to the expiration date.

(ii) If all elements in the currently approved application are the same, the re-submittal may contain the information in clauses (f)(2)(A)(i) and (f)(2)(A)(ii) and a statement of no-change to the previous approved application information concerning clauses (f)(2)(A)(iii), (f)(2)(A)(iv), and (f)(2)(A)(v). Otherwise, the re-submittal must contain all the items specified in subparagraph (f)(2)(A).

(E) An approved application may be modified prior to its expiration provided an amendment request is received and approved by the Executive Officer prior to its implementation.

(3) Alternative Manure Composting Operation Plan Requirements

The operator of an alternative manure composting operation shall submit an alternative manure composting operation plan (plan), as required

pursuant to clause (f)(2)(A)(v). The plan must contain the following required elements:

(A) Compost technology specifications in accordance with following:

(i) Identify the compost technology and manufacturer. Only in-vessel systems are allowed for the purposes of subparagraph (f)(1)(C).

(ii) Describe the aeration system, including blower specifications and aeration cycle.

(iii) Describe any openings in the in-vessel system, including doors, vent holes, gas permeable membranes, etc. Describe expected frequency and duration of venting through doors, vents, or other openings.

(iv) The operator shall operate in-vessel systems in compliance with conditions specified in the approved plan.

(B) Feedstock specifications and preparation in accordance with the following:

(i) Identify feedstock and projected annual throughput. Only livestock manure and green material amendments are allowed for the purposes of subparagraph (f)(1)(C). No other amendments or feedstocks are allowed.

(ii) Composting of incoming manure feedstock must begin within 2 working days of arrival on-site.

(C) Compost cycle specifications in accordance with the following:

(i) Describe length of time for in-vessel composting. Composting within the in-vessel system must occur at least 60 days from the last introduction of feedstock into the system.

(ii) Describe length of time for final curing and storage of compost. Open final curing and storage more than 2 months after removal of compost from the in-vessel system is not allowed.

(4) Alternative Manure Composting Operation Testing Requirements

(A) The operator of an alternative manure composting operation shall perform a source test in accordance with the guidelines and source test methods in Rule 1133.2, Attachment A, no later than 2 months after the beginning of operations and each year thereafter.

(B) The operator of an alternative manure composting operation that has performed a source test as required pursuant to subparagraph (f)(4)(A) shall submit the results of the source test to the Executive Officer within 60 days of the completion of testing.

(5) A manure processing operator who fails to comply with an approved Rule 1127 MPO application, including an alternative manure composting plan, if applicable, shall be in violation of this rule.

(6) A manure processing operator who accepts manure for processing without an approved 1127 MPO application or renewal shall be in violation of this rule.

(g) Reporting and Recordkeeping Requirements

(1) No later than January 1, 2005, the operator of an existing dairy farm shall submit a Rule 1127 notification to the Executive Officer in writing. The Rule 1127 notification shall include:

(A) Dairy farm operator's name;

(B) Name of contact person, if different from operator's name;

(C) Farm name, if applicable;

(D) Farm street address;

(E) Farm mailing address, if different from the street address;

(F) Telephone number for the contact person.

(2) No later than 30 days after operations begin at a new dairy farm or at an existing farm under a new operator, the operator shall submit to the Executive Officer the information required in paragraph (g)(1).

(3) An operator shall submit an annual report to the Executive Officer in writing by January 15th of each year after January 1, 2007. The report shall include:

(A) Information required in paragraph (g)(1); and

(B) Animal population for the previous calendar year, broken out by number of adult cows, heifers, and calves;

(C) Amount of manure removed from the dairy in the preceding calendar year, broken out by the following destinations:

(i) agricultural lands within the jurisdiction of the South Coast Air Quality Management District;

(ii) manure processing operation(s) within the jurisdiction of the South Coast Air Quality Management District, reporting amount to each manure processing operation;

(iii) a location out of the jurisdiction of the South Coast Air Quality Management District.

(4) The dairy operator shall maintain copies of all manure manifests, tipping fee invoices, manure moisture test records, corral clearing records, and stockpile removal records, at the dairy farm for three years or for five years if the dairy farm is a Title V facility. These records shall be supplied to the Executive Officer upon request.

(5) The operator of an alternative manure composting operation shall maintain for three years, or five years if a Title V facility, all of the following records:

(A) Logs of feedstock arrival, including date and amount;

(B) Starting and ending date of each in-vessel compost cycle, and removal date of final compost; and

(C) Logs of aeration and venting events for each compost cycle.

(h) Test Methods

(1) The moisture content of manure shall be determined with an electrical conductivity or microwave moisture meter, or other method approved by South Coast Air Quality Management District, California Air Resources Board and U. S. Environmental Protection Agency. Moisture readings shall be taken by introducing the probe three inches into the manure. All readings shall be recorded. Moisture content samples shall be taken in such a manner as to be representative of the corral or stockpile, with a minimum of 5 readings per corral or stockpile.

(i) Fees

(1) Operators of dairies or manure processing operation shall accompany the submittals required by subdivisions (f) or (g) with applicable filing and evaluation fees pursuant to District Rule 306.

(j) Exemptions

(1) This rule shall not apply to a dairy farm with less than 50 cows, heifers, and/or calves.

(2) An approved alternative manure composting operation is exempt from Rule 1133.2 if the operation is in compliance with subdivision (f).

(3) An operator can be exempted from one of the corral clearings required by paragraph (d)(4) per calendar year, if the operator meets all of the following requirements:

(A) At 60 days after the previous corral clearing, notifies the Executive Officer that the moisture content of the corral manure is above 50%, as determined by an electrical conductivity moisture meter in accordance with paragraph (h)(1).

(B) Upon notification, tests the moisture content of the corral manure at least weekly.

(i) If the moisture content of the corral manure is less than 50%, the corral must be cleared as specified in paragraph (d)(4).

(ii) If the moisture content is greater than 50%, the operator shall record the test results and keep the records required by paragraph (g)(4).

(C) If the moisture content remains greater than 50% after 90 days since the previous corral clearing, the operator shall notify the Executive Officer that the operator is claiming an exemption from a clearing required by paragraph (d)(4).

(4) Dairies that are removing all feedlane manure to a digester, no fewer than 6 days per week, are exempt from the requirements in paragraphs (d)(4) and (d)(5).

(k) Alternative Control Options

(1) In lieu of complying with the provisions of subdivision (e), a person may comply with a plan for achieving equivalent emissions reductions through alternative control measures. To be effective, such a plan shall be approved in writing by the Executive Officer, the California Air Resources Board, and the U.S. Environmental Protection Agency.

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

(Adopted May 4, 1979)(Amended February 5, 1982)(Amended December 7, 1984)
(Amended May 5, 1989)(Amended March 2, 1990)(Amended December 7, 1990)
(Amended August 2, 1991)(Amended February 7, 1992)(Amended March 8, 1996)

RULE 1128. PAPER, FABRIC, AND FILM COATING OPERATIONS

(a) Applicability

This rule applies to all persons applying coatings or wash primers to paper, fabric, or film substrates. The drying and curing processes covered under this rule include, but are not limited to, heated, forced-air dried, and non-heated processes.

(b) Definitions

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

1. AEROSOL COATING PRODUCT is 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.
2. APPLICATION PROCESS is any process where surface coatings are applied and/or cured to paper, fabric, and/or film on a coating line. Such coating line shall include coating applicators, heating or drying ovens, any dryers, and any other equipment where VOC emissions occur.
3. COATING means a layer of material applied on a substrate that forms a film.
4. DIE COATER (OR SLIT COATER) is a type of application equipment that coats an object by flowing coatings through a slit directly onto the object moving past the slit.
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. ELECTROSTATIC APPLICATION is a method of applying coating whereby atomized paint droplets are charged and subsequently deposited on the substrate by electrostatic attraction.
7. EXEMPT COMPOUNDS (See Rule 102-Definition of Terms).
8. FABRIC COATING is any decorative or protective coating or reinforcing material applied on or impregnated into textile fabric, vinyl coated textile fabric, or vinyl sheets.
9. FILM COATING is any coating applied in a web coating process on any film substrate other than paper or fabric, including, but not limited to typewriter ribbons, photographic film, magnetic tape, and metal foil gift wrap, but excluding coatings applied to packaging used exclusively for food and health-care products for human or animal consumption.
10. FLOW COATER is a type of application equipment that coats an object by flowing a stream of coating over the object and draining off any excess coating.
11. FOAM COATER is a type of application equipment that coats an object by flowing foam through holes or a slit directly onto the object moving underneath it.
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

$$\text{Water and Less Exempt Compounds} = \frac{Ws - Ww - Wes}{Vm - Vw - Ves}$$

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

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:

$$\text{Grams of VOC per Liter of Material} = \frac{Ws - Ww - Wes}{Vm}$$

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

14. HAND APPLICATION METHOD is a method of applying a coating to a substrate using manually held, non-mechanically operated equipment. Such equipment includes paint brushes, hand rollers, caulking guns, trowels, spatulas, syringe daubers, rags, and sponges.
15. HEATING OVEN is a device into which paper, fabric or film is put in order to dry or cure the applied coating by applying heat.
16. HIGH VOLUME LOW PRESSURE (HVLP) SPRAY is an atomized coating application system which is operated between 0.1 and 10 psig air pressure at the air cap/tip of the spray gun.
17. PAPER COATING is any coating applied on or impregnated into paper, including, but not limited to, adhesive tapes and labels, book covers, post cards, office copier paper, drafting paper, and pressure sensitive tapes.
18. PLASTISOL is a coating that is a liquid dispersion of small particles of resins and plastisizers that are fused to become a plastic.
19. PLASTISIZER is a material used to keep plastic material soft and viscous.
20. ROLL COATER is a type of application equipment in which a series of mechanical rollers form a thin coating film on the surface of a roller, which is subsequently applied to a substrate by moving the substrate underneath the roller.
21. 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.
22. VOLATILE ORGANIC COMPOUND (VOC) is any volatile chemical compound which contains the element carbon excluding methane, carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates, ammonium carbonate, and exempt compounds.
23. WASH PRIMER is a material used to clean and/or to activate surfaces of paper, fabric, or film and may contain no more than five percent, by weight, solid materials.

(c) Requirements

1. Until January 1, 1994, a person shall not use or apply any coating in any paper, fabric, or film coating application

process involving the use of heating ovens unless:

(A) the coating contains less than 265 grams of VOC per liter of coating, less water, and less exempt compounds, as applied, and is applied with a minimum transfer efficiency of 95 percent; or

(B) the VOC emissions are collected and reduced to less than 120 grams per liter of coating applied.

2. On or after January 1, 1994, a person shall not use or apply any coating in any paper, fabric or film coating application process, with or without heating ovens, unless:

   (A) The coating contains less than 265 grams of VOC per liter of coating less water, and less exempt compounds, as applied; or

   (B) VOC emissions are collected and reduced by an approved emission control system pursuant to subdivisions (d) and (j).

3. A person shall not use or apply any plastisol to any paper, fabric, or film substrate unless the coating contains less than 20 grams of VOC per liter of coating, less water, and less exempt compounds, as applied.
4. Until January 1, 1994, a person shall not use wash primer on any paper, fabric, and/or film used in any paper, fabric, and/or film coating application process involving the use of heating ovens, unless:

   (A) the wash primer contains less than 265 grams of VOC per liter of material used, or

   (B) the VOC emissions from the washing operations are collected and reduced to less than 120 grams per liter of washing material used.

5. On or after January 1, 1994, a person shall not use wash primer on any paper, fabric, and/or film used in any paper, fabric, and/or film coating application process, with or without heating ovens, unless:

   (A) The wash primer contains less than 265 grams of VOC per liter of material used, or

   (B) VOC emissions are collected and reduced by an approved emission control system, pursuant to subdivisions (d) and (j).

6. Application Methods

   On or after January 1, 1994, no person shall apply coatings, unless these materials are applied with equipment operated according to manufacturer's specifications, and by the use of one of the following methods:

   (A) Flow Coater;

   (B) Roll Coater;

   (C) Dip Coater;

   (D) Foam Coater;

   (E) Die Coater;

   (F) Hand Application Methods;

   (G) High-Volume Low-Pressure (HVLP) spray, only for air-dried coatings; or

   (H) Such other alternative spray application methods as are demonstrated in accordance with the provisions of paragraph (f)(4), to be capable of achieving equivalent or better transfer efficiency than the application method listed in subparagraph (c)(6)(G), and for which written approval of the Executive Officer has been obtained;

7. Containers for organic solvents and mixing tanks for coatings containing organic solvents shall be free from leaks and shall be covered except when adding or removing materials, cleaning, or when the container is empty.
8. A person shall not:

   (A) use VOC-containing materials for the cleaning of application equipment used in paper, fabric, and/or film coating operations, excluding hand wiping, unless:

   (i) 85 percent of the VOCs are collected and properly disposed of in such a way that they are not emitted into the atmosphere; or

   (ii) the clean-up materials contain 15 percent or less, by weight, VOC.

   (B) use other than closed containers for disposal of cloth or paper used for surface preparation, clean-up, and the removal of uncured coatings, which are impregnated with solvent containing VOC.

   (C) use other than closed containers for disposal of cloth or paper used in stripping cured coatings, which are impregnated with solvent containing VOC.

9. Solvent Cleaning Operations: Storage and Disposal of VOC Containing Materials

   Subparagraphs (c)(8)(A), (c)(8)(B) and hand wipe cleaning of application equipment used in paper, fabric, and/or film coating operations 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.

(d) Approved Emission Control System

A person may comply with the provisions of paragraph (c)(2), (c)(5) or (c)(6) by using an emission control system for reducing VOC emissions consisting of collection and control devices, which are approved, in writing, by the Executive Officer and installed in accordance with the Compliance Schedule of subdivision (j) and operated subject to the following provisions:

1. The emission collection system shall collect at least 90 percent, by weight, of the emissions generated by the source of emissions.
2. The control device shall reduce emissions from an emission collection system by at least 95 percent, by weight, or the output of the control device is 50 ppm, by volume, calculated as carbon, with no dilution.

(e) Recordkeeping Requirements

Records shall be maintained pursuant to Rule 109.

(f) 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.

VOC emissions determined to exceed any limits established by this rule through the use of the above-referenced sets of test methods shall consititute 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 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.
4. The transfer efficiency of alternative coating application methods shall be determined in accordance with SCAQMD method "Spray Equipment Transfer Efficiency Test Procedure for Equipment User, May 24, 1989."

   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 (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.

(g) 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.

(h) Alternative Emission Control Plan

An owner/operator may comply with subparagraph (c)(1)(A) or (c)(2)(A) by means of an Alternative Emission Control Plan pursuant to Rule 108.

(i) Exemptions

1. Until January 1, 1994, the provisions of subdivision (c) shall not apply to any coating application facility which applies less than two gallons of coatings per day.
2. The provisions of this rule shall not apply to aerosol coating products.
3. The provisions of subparagraph (c)(6) shall not apply to the application of materials that contain less than 20 g/L of VOC per liter of material.
4. The provisions of subdivision (c) shall not apply to laboratories which apply less than two (2) gallons per day of coatings to test specimens for purposes of testing for production-related operations, research, development, and quality control.
5. The provisions of this rule shall not apply to the application of coatings to fine arts paintings, or to scenic or theatrical backgrounds for motion pictures, television, and theater.
6. The provisions of subdivision (c) shall not apply to laboratories located at facilities that manufacture reinforced plastic, structural materials, which apply no more than three (3) gallons per day of coatings to test specimens for either testing production-related operations, research, development, or quality control.

(j) Compliance Schedule

Persons complying with the provisions of subdivision (d) shall comply with the following increments of progress to achieve compliance:

1. By July 1, 1992, submit required applications for permits to construct and operate, to achieve compliance with paragraphs (c)(2), (c)(5), or (c)(6).

2. By January 1, 1994, demonstrate compliance with paragraphs (c)(2), (c)(5), or (c)(6).

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

(Adopted August 2, 1991)(Amended July 9, 1993) (Amended December 13, 1996)

RULE 1130.1 - SCREEN PRINTING OPERATIONS

(a) Purpose and Applicability

The purpose of this rule is to reduce emissions of volatile organic compounds (VOC) from screen printing operations. This rule applies to persons performing screen printing operations or who sell, distribute, or require the use of screen printing materials in the District.

(b) Definitions

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

1. ADDITIVES are compounds added to screen printing materials to improve flow or workability or to obtain a desired characteristic or property. The term "additives" excludes thinners.

2. ADHESIVE is any substance that is used to bond one surface to another surface.

3. CAPTURE EFFICIENCY, in percent, is the ratio of the weight of the VOC in the screen printing operation effluent stream entering the control device to the weight of VOC emitted from screen printing operations, both measured simultaneously, and shall be calculated by the following equation:

   Undisplayed Graphic

   Where: W_c = weight of VOC in screen printing operation effluent stream entering control device

   W_e = weight of VOC emitted

4. CERAMIC DECALS are water-slide decals which are used to transfer images onto ceramic materials by firing above 800°F.

5. CERAMIC DECAL INK is any ink which is screen printed onto treated paper stock and is used in the production of ceramic decals.

6. CHLORINE INDICATOR is a product which is screen printed with an ink that changes color to indicate chlorine concentrations in the range of 0 - 11 parts per million (ppm).

7. CLEAR INK is a colorless ink that is screen printed on decal paper and either serves as the base film on which opaque inks are screen printed, or as a protective film over opaque inks, and is used in the production of water-slide decals.

8. COATING is a layer of material applied to a substrate in a substantially unbroken film.

9. COLD BENDING is a process which subjects the printed color, design, alphabet, symbol, or numeral on a printed object to permanent bending through the application of force.

10. CONDUCTIVE INKS are screen printing inks which transmit electricity and are used in the production of electronic circuits.

11. CONTAINERS are plastic products manufactured for storing materials. Containers include, but are not limited to, bottles, buckets, and jars.

12. CONTROL DEVICE EFFICIENCY, in percent, is the ratio of the weight of the VOC removed by the control device from the screen printing operation effluent stream entering the control device to the weight of the VOC in the screen printing operation effluent stream entering the control device, both measured simultaneously, and shall be calculated by the following equation:

Undisplayed Graphic

Where: W_c = weight of VOC in screen printing operation effluent stream entering control device

W_a = weight of VOC discharged from the control device

13. DEGREE is a unit for measuring temperature or an angle.

14. ELECTRONIC CIRCUIT is a product which consists of a substrate and a circuitry created by screen printing a conductive ink on the substrate.

15. EMBOSSING is a process which subjects the printed color, design, alphabet, symbol, or numeral on a printed object to a mechanical force which results in permanently raising the level of the impacted area.

16. EXEMPT COMPOUNDS (See Rule 102-Definition of Terms).

17. EXTREME PERFORMANCE SCREEN PRINTING MATERIALS are screen printing inks and coatings which qualify for extreme performance classification under the provisions of subdivision (e).

18. FINE DETAIL LOOSELEAF BINDER INK is a printing ink used in the manufacturing of loose-leaf binders to print graphics which are lighter in color than the background on which they are printed and which have a width of 1/24th of an inch or smaller.

19. FLUORESCENT INK is a printing ink which glows brighter than conventional ink when exposed to light due to pigments which have the property of emitting radiation in the visible range as a result of absorption of radiation in the ultraviolet range from some other source.

20. GRAMS OF VOC PER LITER OF COATING (OR INK OR ADHESIVE), LESS WATER AND LESS EXEMPT COMPOUNDS, is the weight of VOC per combined volume of VOC and coating (or ink or adhesive) solids, and which is calculated by the following equation:

Undisplayed Graphic

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

21. GRAMS OF VOC PER LITER OF MATERIAL is the weight of VOC per volume of material (ink, coating or adhesive) which is calculated by the following equation:

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

22. HEAT-BENDING is a process which subjects the printed color, design, alphabet, symbol, or numeral on a printed object to permanent bending through the application of heat and force.

23. HIGH-VOC SERIGRAPH INKS are screen printing materials used in making serigraphs and which contain, on an as applied basis, VOC in excess of 400 grams per liter (3.3 pounds per gallon), less water and exempt compounds.

24. INFLATING is a process of filling a printed object with air or gas which results in the swelling of the printed area of the object.

25. LOOSE-LEAF BINDER METALLIC INK is a metallic ink as defined in paragraph (b)(29) which is used on loose-leaf binders and is not silver or golden in color.

26. MAN-MADE FIBERS are threadlike materials produced from the spinning of synthetic organic polymers or cellulose-based organic polymers and which are used in the manufacture of man-made textiles. Man-made fibers include, but are not limited to, rayon, acetate, triacetate, nylon, and polyester and exclude fiberglass.

27. MAN-MADE TEXTILES are woven or knitted fabrics made of one hundred percent (100%) man-made fibers, or natural fibers which are coated with plastic materials.

28. MECHANICALLY-FORMED PRODUCTS are screen-printed products made of plastic substrates which are subjected to vacuum-forming, embossing, inflating, heat-bending, or cold bending processes after the screen printing operation.

29. METALLIC INK is ink containing at least 50 grams of elemental metal particles per liter of ink (0.4 lb/gal) as applied and which is not used in the manufacture of an electronic circuit.

30. NATURAL FIBERS are naturally-occurring materials, such as wool, silk, cotton, and flax.

31. NON-POROUS SUBSTRATE is a substrate that has no tiny pores or openings in its physical structure in which to absorb fluids. Non-porous substrates include, but are not limited to, glass, metals and plastics.

32. OPAQUE INK is an ink containing colored pigments which is screen printed over a clear base ink to form the colored images in the production of water slide decals.

33. OVERALL CONTROL EFFICIENCY (C.E.), in percent, is the ratio of the weight of the VOC removed by the emission control system from the screen printing operation effluent stream entering the control device to the total VOC emitted from the screen printing operations, both measured simultaneously, and shall be calculated by the following equation:

Undisplayed Graphic

Where: W_c = weight of VOC in screen printing operation effluent stream entering control device

W_a = weight of VOC discharged from the control device

W_e = weight of VOC emitted

34. OVERLAY is a screen-printed product made of polycarbonate, polyester, or clear vinyl plastic substrate which activates the circuitry on an electronic circuit, as defined in paragraph (b)(14), underneath it when pressed against the electronic circuit. Overlays and electronic circuits are used in membrane switches of products such as computer keyboards, calculators, control panels, and home appliances.

35. PLASTICS are man-made materials, excluding rubber, produced from high molecular weight synthetic or natural organic polymers which are capable of being shaped or flowing under heat and pressure into desired forms at some stage of their manufacture. Plastics include, but are not limited to, acrylonitrile butadiene styrene (ABS), acrylic, butylate, epoxy, vinyl, polyvinyl chloride (PVC), polyethylene, polypropylene, polystyrene, polycarbonate, polyamide, polyester, and polyurethane.

36. POLYETHYLENE PRODUCTS are screen-printed flags, banners, signs, or displays made of polyethylene plastic substrate.

37. PRINTING is any operation that imparts a color, design, alphabet, symbol, or numeral on a substrate.

38. PRINTING INK is any viscous fluid used in printing, impressing, or transferring an image onto a substrate.

39. RESISTS are inks that are screen printed to (A) form the required alphabets, numerals, designs, or symbols on the surface of the substrate; and (B) protect the screen printed or covered surface from the subsequent application of etching or plating solution, and (C) are inks that may be later removed from the substrate by a resist stripper. Resists applications include, but are not limited to, etched electronic circuits, display screens, chemical milling of parts, nameplates and signage.

40. SCRATCH-OFF INK is an opaque printing ink formulated to be applied on a substrate to hide the information already printed on the substrate and to be scratched-off to reveal the printed information. Scratch-off inks are used to make products, which include but are not limited to, lottery tickets and contest games.

41. SCREEN PRINTING is a printing process in which printing ink, coating, or adhesive material is passed through a taut web or fabric to which a refined form of stencil has been applied. The stencil openings determine the form and dimensions of the imprint.

42. SCREEN PRINTING EQUIPMENT is equipment used for applying screen printing materials, including the flash-off area, ovens or dryers, conveyors, or other equipment operating as part of screen printing operations.

43. SCREEN PRINTING MATERIALS are any inks, coatings, or adhesives, including added thinners or additives, used in screen printing.

44. SCREEN PRINTING OPERATIONS are operations which include screen printing and any subsequent drying, curing, or conveying of the screen-printed substrate.

45. SERIGRAPHS are color paintings made by screen printing operations

46. STAINED GLASS OVERLAY is untreated polyester film, screen printed with polyester-based screen printing ink, to simulate the appearance of stained glass.

47. STERILIZATION INDICATOR is a product which is screen printed with an ink that changes color to indicate that sterilization has occurred. Sterilization indicators are used to monitor the sterilization of medical instruments, autoclave efficiency, and the thermal processing of foods for prevention of spoilage.

48. SUB-PRINTED PRODUCTS are screen-printed products, which include, but are not limited to, overlays or nameplates, made of a polycarbonate, polyester, or clear vinyl plastic substrate on which the screen printing material is applied on the unexposed side followed by an adhesive coat.

49. UNSEALED ALUMINUM is chemically anodized aluminum used to make products which are screen printed with a dye and subsequently immersed in a sealing bath to seal the printed dye in the pores of the aluminum.

50. VACUUM-FORMING is a process which imparts a desired shape to a printed object by subjecting the screen printed area of the object to a vacuum.

51. VOLATILE ORGANIC COMPOUND (VOC) is any chemical compound that contains the element carbon, excluding methane, carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates, ammonium carbonate and exempt compounds.

52. WATER SLIDE DECALS are decals which are screen printed onto treated paper stock, and are removable from the stock by the dissolution of an underlying, water-soluble adhesive or a similar carrier.

53. WATER SLIDE DECAL ADHESIVE is any adhesive which is screen printed onto treated paper stock, in the production of water slide decals.

(c) Requirements

1. VOC Content of Screen Printing Materials
A person shall not apply to any substrate any screen printing material, excluding extreme performance screen printing materials, which contains, as applied, a total amount of VOC in excess of the limits specified in subparagraphs (c)(1)(A), (c)(1)(B), or (c)(1)(C). The applicable VOC limit for a screen printing operation shall be determined by first looking for the product in subparagraph (c)(1)(A). If the product is not listed in subparagraph (c)(1)A), look for the product's substrate in subparagraph (c)(1)(B). If the substrate is not listed in subparagraph (c)(1)(B), look for the applicable limit in subparagraph (c)(1)(C).

In lieu of meeting the requirements in subparagraph (c)(1)(C), a person may comply with the requirements in paragraph (c)(2) if the screen printing material qualifies for an extreme performance classification under subdivision (e).

(A) For screen printing coatings and inks used in the production of the following products:

PRODUCT	VOC LIMIT grams per Liter of Coating (or Ink), Less water and Less Exempt Compounds On and After December 13, 1996	
	g/L	lbs/gal
Chlorine Indicator	500	4.2
Containers	800	6.7
Electronic Circuit	850	7.1
Mechanically-Formed Products	800	6.7
Overlays	800	6.7
Polyethylene Products	800	6.7
Stained Glass Overlay	800	6.7

Sterilization Indicator	600	5.0
Sub-Printed Products	800	6.7
Water Slide Decals:		
Opaque Inks	800	6.7
Clear Inks	800	6.7
Ceramic Decal Inks	800	6.7

(B) For screen printing coatings and inks not regulated by subparagraph (c)(1)(A) and which are applied to the following specified substrates:

VOC LIMIT

grams per Liter of Coating
(or Ink), Less water and
Less Exempt Compounds

SUBSTRATE

On and After
December 13, 1996

	g/L	lbs/gal
Ceramic	800	6.7
Fiberglass	600	5.0
Glass or Metal	600	5.0
Man-Made Textile	800	6.7
Unsealed Aluminum	800	6.7

If a substrate is regulated under more than one substrate category listed in subparagraph (c)(1)(B), the category with the highest VOC limit shall apply.

(C) For screen printing materials not regulated by the provisions in subparagraph (c)(1)(A) or (c)(1)(B), which have the following material classifications:

VOC LIMIT

grams per Liter of Coating
(or Ink), Less water and
Less Exempt Compounds

SCREEN PRINTING MATERIAL

On and After
December 13, 1996

	g/L	lbs/gal
Adhesive	400	3.3
Coating	400	3.3
Fine Detail Loose-leaf Binder Ink	745	6.2
Fluorescent Ink	540	4.5
High-VOC Serigraph Ink	800	6.7
Loose-leaf Binder Metallic Ink	745	6.2
Metallic Ink	400	3.3
Printing Ink	400	3.3

Resists	600	5.0
Scratch-Off Ink	800	6.7
Water-Slide Decal Adhesive	800	6.7

If a screen printing material is regulated under more than one screen printing material category listed in subparagraph (c)(1)(C), the category with the highest VOC limit shall apply.

2. VOC Content of Extreme Performance Screen Printing Materials
   A person shall not apply any extreme performance screen printing material in excess of the limits specified below:

VOC LIMIT

Grams of VOC per Liter of
ExtremePerformance Screen Printing
Material, Less Water and Less
Exempt Compounds

	g/L	lbs/gal
On and after July 9, 1993	800	6.7
On and after January 1, 2003	400	3.3

3. Usage of High-VOC Serigraph Inks
   The total usage of high-VOC serigraph inks, as defined in paragraph (b)(23), shall not exceed 10 percent, (by volume), of the total usage of screen printing materials applied on all serigraphs at a facility, on a monthly basis, unless an approved emission control system is used to reduce emissions from high-VOC serigraph inks by an equivalent or greater level to that which would have been achieved by the use of an ink containing 3.3 pounds per gallon VOC (less water and exempt compounds). The required overall control efficiency of the emission control system shall be determined by the equation in paragraph (d)(1).

4. 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.

5. Recordkeeping
   Any person who owns or operates a facility at which screen printing operations are conducted shall maintain records in accordance with District Rule 109.

6. Prohibition of Specification and Sale
   No person shall sell, distribute, or require any other person to use in the District any VOC-containing material subject to the provisions of this rule which, when thinned or reduced according to the manufacturer's recommendation for application, does not meet the applicable VOC limits required by this rule for the specific application.

7. Labeling
   Labels of screen printing materials shall comply with the provisions of Rules 443 and 443.1.

(d) Approved Emission Control System

1. Any person who owns or operates a facility at which screen printing operations are conducted may comply with the provisions of subparagraph (c)(1)(A), (c)(1)(B), or (c)(1)(C), or paragraph (c)(2) by using an approved emission control system for reducing emissions of VOC, consisting of collection and control devices which have been approved in writing by the Executive Officer. The approved emission control system shall reduce the VOC emissions resulting from the use of non-compliant inks, adhesives and coatings by an equivalent or greater level

to that which would have been achieved by the provisions of subparagraph (c)(1)(A), (c)(1)(B), (c)(1)(C), or paragraph (c)(2).

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:

Undisplayed Graphic

Where: C.E. = Overall Control Efficiency, percent

VOC_{LWc} = VOC Limit of Rule 1130.1, less water and less exempt compounds, g/L, pursuant to subdivision (c).

VOCLWc = 400 g/L for high-VOC serigraph inks if compliance with the 10% requirement in paragraph (c)(3) is not achieved.

VOCLWc = 800 g/L for high-VOC serigraph inks if compliance with the 10% requirement in paragraph (c)(3) is achieved.

$VOC_{LWn,Max}$ = Maximum VOC content of non-compliant ink (or coating or adhesive) used in conjunction with a control device, less water and exempt compounds, g/L.

$D_{n,Max}$ = Density of solvent, reducer, or thinner contained in the non-compliant ink (or coating, or adhesive) which has the maximum VOC content of all non-compliant inks (or coatings, or adhesives) used on a printing line, g/L.

D_c = Density of corresponding solvent, reducer, or thinner used in the compliant ink (or coating, or adhesive) system = 880 g/L

2. The control device efficiency, as defined in paragraph (b)(12), of a control device shall not be less than 95 percent.

(e) Qualification for Classification as an Extreme Performance Screen Printing Material
A screen printing ink or coating may be classified as an extreme performance screen printing material, provided that the applicator receives written approval of such classification from the Executive Officer prior to the application of such ink or coating, and it is shown that the ink or the coating, in its intended use, is screen printed on a non-porous substrate and exposed to any of the following:

1. Petroleum-based fuels, or hydraulic fluids containing phosphate esters, or industrial-grade acid or alkaline solutions;

2. Industrial-grade detergents, cleaners, or abrasive scouring agents;

3. Other chemicals having similar degrading properties as in paragraphs (e)(1) or (e)(2), as determined by the Executive Officer;

4. Continuous outdoor conditions for more than five (5) years; or

5. Other harsh environmental conditions as determined by the Executive Officer.

   Screen printing materials subject to subparagraph (c)(1)(A) or (c)(1)(B) shall not be eligible for extreme performance classification. If a screen printing material complies with the requirements of subparagraph (c)(1)(C), an extreme performance classification is not required.

(f) Rule 442 Applicability
Any screen printing operation which is exempt from all or a portion of the VOC limits of this rule shall comply with the provisions of Rule 442.

(g) Test Methods

1. Methods of Analysis
   For purposes of this rule, the following test methods shall be used:

   (A) VOC Content of Adhesives, Coatings, and Inks
   The VOC content shall be determined by the methods specified in clauses (g)(1)(A)(i) or (g)(1)(A)(ii).

   (i) United States Environmental Protection Agency (USEPA) Reference Method 24, (40 Code of Federal Regulations, Part 60, Appendix A). The exempt compounds content shall be determined by District Method 303 (Determination of Exempt Compounds) contained in the District Laboratory Methods of Analysis for Enforcement Samples-manual; or

   (ii) District Method 304 [Determination of Volatile Organic Compounds (VOCs) in Various Materials] contained in the District Laboratory Methods of Analysis for Enforcement Samples manual.

   (iii) 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 subdivision (c), only at such time as manufacturers specify which individual compounds are used in the formulation of the screen printing material and identify the test methods, which have been approved by the USEPA and the District prior to such analysis, that can be used to quantify the amount of each exempt compound.

   (B) Metal Content in Inks
   The metal content of metallic inks shall be determined by District Method 318 (Determination of Elemental Metal in Coatings by X-Ray Diffraction) contained in the District Laboratory Methods of Analysis for Enforcement Samples-manual.

   (C) Determination of Fibers
   The presence of natural fibers in textiles shall be determined by District Method 317 (Determination of Natural Fibers) contained in the District Laboratory Methods of Analysis for Enforcement Samples manual.

2. Determination of Efficiency of Emission Control Systems
   (A) The capture efficiency of an emission control system as defined in paragraph (b)(3) shall be determined by a minimum of three sampling runs subject to the data quality objective (DQO) presented in the USEPA technical guideline document, "Guidelines for Determining Capture Efficiency, January 9, 1995". Individual capture efficiency test runs subject to the USEPA technical guidelines shall be determined by:

   (i) Applicable USEPA Methods 204, 204A, 204B, 204C, 204E, and/or 204F; or

   (ii) District's Protocol for Determination of Volatile Organic Compounds (VOC) Capture Efficiency; or

   (iii) any other method approved by the USEPA, the California Air Resources Board (ARB), and the District Executive Officer.

   (iv) The capture efficiency of a collection device which meets the requirements of a totally enclosed chamber as specified in USEPA methods 204, 204A, 204B, 204C, 204E, and/or 204F shall be deemed 100 percent.

   (B) The control device efficiency of an emission control system as defined in paragraph (b)(12) 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 District 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 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.

4. Equivalent Test Methods
   Other test methods determined to be equivalent after review by the staffs of the District, ARB, and the USEPA, and approved in writing by the District Executive Officer may also be used for methods of analysis.

5. Test Method Dates
   All test methods referenced in this section shall be the most recent versions approved by the District, ARB, and USEPA. The Executive Officer may update test methods as necessary to reflect the most accurate method available, provided the method does not affect the stringency of the rule. These updates are subject to approval by ARB and USEPA.

(h) Exemptions

1. The requirements of subparagraphs (c)(1)(A), (c)(1)(B), or (c)(1)(C) shall not apply to a facility which emits two (2) pounds or less of VOC each and every day from the use of screen printing materials.

2. The requirements of subparagraphs (c)(1)(A), (c)(1)(B), or (c)(1)(C) shall not apply to screen printing operations performed by manufacturers of screen printing materials for purposes of conducting performance laboratory tests or doing research and development, provided that the VOC emissions from such screen printing operations are two (2) pounds or less per day.

3. The prohibition specified in paragraph (c)(6) shall not apply to VOC-containing materials subject to the provisions of this rule which will be used solely outside of the District if records are maintained to the satisfaction of the Executive Officer.

4. The prohibition specified in paragraph (c)(6) shall not apply to persons selling to, distributing to, or requiring the use of non-compliant materials by, other persons who are operating an approved emission control system under subdivision (d), or operating pursuant to paragraph (h)(1).

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

(Adopted October 3, 1980)(Amended February 1, 1985)(Amended May 5, 1989)
(Amended February 2, 1990)(Amended March 2, 1990)(Amended April 6, 1990)
(Amended June 1, 1990)(Amended November 2, 1990)(Amended December 7, 1990)
(Amended August 2, 1991)(Amended March 6, 1992)(Amended July 9, 1993)
(Amended September 8, 1995)(Amended March 8, 1996)(Amended October 8, 1999)
(Amended May 2, 2014)

RULE 1130. GRAPHIC ARTS

(a) Purpose and Applicability

The purpose of this rule is to reduce Volatile Organic Compound (VOC) emissions from graphic arts operations. This rule applies to any person performing graphic arts operations or who supplies, sells, offers for sale, markets, manufactures, blends, repackages, stores at a worksite, distributes, applies or solicits the application of graphic arts materials for use in the District.

(b) Definitions

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

(1) AEROSOL COATING PRODUCT is 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 marking and traffic marking applications.

(2) ALCOHOL is an organic compound that contains a hydroxyl (OH) group and is used in the fountain solution to reduce the surface tension and increase the viscosity of water to prevent piling (ink build-up). For purposes of this rule, alcohol includes, but is not limited to, isopropyl alcohol (isopropanol), n-propanol and ethanol.

(3) ALCOHOL SUBSTITUTE is an additive that contains VOCs but no alcohol and is used in the fountain solution to reduce the surface tension and increase the viscosity of water to prevent piling (ink build-up).

(4) COATING is a material which is applied to a surface in order to beautify, protect or provide a barrier to such surface in a relatively unbroken film.

(5) CAPTURE EFFICIENCY, in percent, is the ratio of the weight of the VOC in the effluent stream entering the control device to the weight of VOC emitted from graphic arts operations, both measured simultaneously, and can be calculated by the following equation:

$$\text{Capture Efficiency} = [W_c/W_e] \times 100$$

Where: W_c = weight of VOC entering control device

W_e = weight of VOC emitted

(6) CONTROL DEVICE EFFICIENCY, in percent, is the ratio of the weight of the VOC removed by the control device from the effluent stream entering the control device to the weight of the VOC in the effluent stream entering the control device, both measured simultaneously, and can be calculated by the following equation:

$$\text{Control Device Efficiency} = [(W_c - W_a)/W_c] \times 100$$

Where: W_c = Weight of VOC entering control device

W_a = Weight of VOC discharged from the control device

(7) END-USER is a person who performs graphic arts operations.

(8) ENERGY CURABLE COATINGS, INKS AND ADHESIVES are single-component reactive products that cure upon exposure to visible-light, ultra-violet light or to an electron beam. The VOC content of thin film Energy Curable Coatings, Inks And Adhesives may be determined by manufacturers using ASTM Test Method 7767-11 "Standard Test Method to Measure Volatiles from Radiation Curable Acrylate Monomers, Oligomers, and Blends and Thin Coatings Made from Them."

(9) EXEMPT COMPOUNDS (See Rule 102-Definition of Terms).

(10) FACILITY is 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 facility.

(11) FLEXOGRAPHIC PRINTING is a printing method utilizing a flexible rubber or other elastomeric plate in which the image area is raised relative to the non-image area.

(12) FLUORESCENT INK is a printing ink that emits electromagnetic radiation as a result of the absorption of energy from radiation.

(13) FOUNTAIN SOLUTION is the solution used in offset lithographic printing which is applied to the image plate to maintain the hydrophilic properties of the non-image areas. It is primarily water and contains at least one of the following materials: etchants such as mineral salts; hydrophilic gums; or VOC additives to reduce the surface tension of the solution.

(14) GRAMS OF VOC PER LITER OF COATING (OR INK OR ADHESIVE), LESS WATER AND LESS EXEMPT COMPOUNDS, is the weight of VOC per combined volume of VOC and coating (or ink or adhesive) solids and can be calculated by the following equation:

$$\text{Grams of VOC per Liter of Coating (or Ink or Adhesive), Less Water and Less Exempt Compounds} = \frac{W_s - W_w - W_{es}}{V_m - V_w - V_{es}}$$

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 coatings that contain reactive diluents, the grams of VOC per Liter of Coating (or ink or adhesive), Less Water and Less Exempt Compounds, shall be calculated by the following equation:

$$\text{Grams of VOC per Liter of Coating (or Ink or Adhesive), Less Water and Less Exempt Compounds} = \frac{W_s - W_w - W_{es}}{V_m - V_w - V_{es}}$$

Where:
- W_s = weight of volatile compounds 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

(15) 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

(16) GRAPHIC ARTS OPERATIONS are gravure, letterpress, flexographic, and offset lithographic printing processes or related coating or laminating processes.

(17) GRAPHIC ARTS MATERIALS are any inks, coatings, or adhesives, including added thinners or retarders, used in printing or related coating or laminating processes.

(18) GRAVURE PRINTING is an intaglio printing process in which the ink is carried in minute etched or engraved wells on a roll or cylinder, excess ink being removed from the surface by a doctor blade.

(19) HEATSET INK is an offset lithographic printing ink used on continuous web-fed printing presses that are equipped with hot air high velocity dryers. The ink dries or sets by heat induced evaporation of the ink oils and subsequent chilling of the ink by chill rolls.

(20) LAMINATION is a process of composing two or more layers of material to form a single, multiple-layer sheet by using an adhesive.

(21) LETTERPRESS PRINTING is a printing process in which the image area is raised relative to the non-image area and the ink is transferred to the substrate directly from the image surface.

(22) MATTE FINISH INK is a flexographic printing ink which is used on non-porous substrates in flexographic printing operations and contains at least five (5) percent by weight silicon dioxide flattening agent.

(23) METALLIC INK is a flexographic printing ink which is used on non-porous substrates in flexographic printing operations and contains at least 28 percent by weight elemental metal particles.

(24) NON-HEATSET INK is an offset lithographic printing ink that sets and dries by absorption into the substrate, and hardens by ambient air oxidation that may be accelerated by the use of infrared light sources. For the purposes of this definition energy curable inks are examples of non-heatset inks.

(25) NON-POROUS SUBSTRATE is a substrate whose surface prevents penetration by water, including but not limited to foil, polyethylene, polypropylene, cellophane, paper or paperboard coated with a non-porous material, metalized polyester, nylon, and mylar.

(26) OFFSET LITHOGRAPHIC PRINTING is a planographic printing process in which the image and non-image areas are on the same plane of a thin lithographic plate and are chemically differentiated. The ink film is transferred from the lithographic plate to an intermediary surface, a rubber covered cylinder called a blanket, which, in turn, transfers the ink to the substrate. This printing process differs from other printing processes where the image is typically printed from a raised or recessed surface.

(27) OVERALL CONTROL EFFICIENCY (C.E.), in percent, is the ratio of the weight of the VOC removed by the emission control system from the effluent stream entering the control device to the total VOC emitted from graphic arts operations, both measured simultaneously, and can be calculated by the following equations:

$$\text{C.E.} = \left[\left(W_c - W_a\right)/W_e\right] \text{x}\, 100$$

$$\text{C.E.} = \left[\left(\text{Capture Efficiency}\right) \text{x} \left(\text{Control Device Efficiency}\right)/100\right]$$

Where: W_c = Weight of VOC entering control device

W_a = Weight of VOC discharged from the control device

W_e = Weight of VOC emitted

(28) PACKAGING GRAVURE is gravure printing on paper, paperboard, foil, film or other substrates used to produce containers or packages.

(29) POROUS SUBSTRATE is a substrate whose surface does not prevent the penetration by water, including but not limited to paper, paperboard, and any paper product that is coated with a porous material.

(30) POTENTIAL TO EMIT is the maximum capacity of a stationary source to emit a regulated air pollutant based on its physical or operational design. Any physical or operational limitation on the capacity of the stationary

source to emit a pollutant, including air pollution control equipment and restrictions on hours of operations or on the type of material combusted, stored, or processed, shall be treated as part of the design only if the limitation is federally enforceable.

(31) PRINTING in the graphic arts is any operation that imparts color, design, alphabet, or numerals on a substrate.

(32) PRINTING INK is a pigmented fluid or viscous material used in printing.

(33) PROOF PRESS is a press used only to check the quality of print, color reproduction, and editorial content.

(34) PUBLICATION GRAVURE is gravure printing on paper subsequently formed into books, magazines, catalogues, brochures, directories, newspaper supplements or other types of printed materials not classified as packaging gravure.

(35) REACTIVE DILUENT is a liquid which is a VOC during application and one in which, through chemical reaction or physical actions, such as adsorption or retention in the substrate, 20 percent or more of the VOC becomes an integral part of a finished product.

(36) REFRIGERATED CHILLER is a device that continuously maintains and supplies fountain solution to a holding tray at a temperature of 55 degrees Fahrenheit or less measured at the supply tank, thereby reducing evaporative emissions of VOCs in fountain solutions.

(37) SOLVENT CLEANING is as defined in Rule 1171 – Solvent Cleaning Operations.

(38) STERILIZATION INDICATING INKS are 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.

(39) VOLATILE ORGANIC COMPOUND (VOC) is as defined in Rule 102 – Definition of Terms.

(40) WEB-FED is an automatic system which supplies substrate from a continuous roll, or from an extrusion process.

(c) Requirements

(1) VOC Content of Graphic Arts Materials

No person shall supply, sell, offer for sale, market, manufacture, blend, package, repackage, distribute, apply or solicit the application of any

graphic arts material, including any VOC-containing materials added to the original graphic arts materials, for use in the District, which contains VOC in excess of the VOC content limits set-forth in the Table of Standards I below:

TABLE OF STANDARDS I

VOC CONTENT LIMITS Grams of VOC Per Liter of Coating, Ink, and Adhesive, Less Water And Less Exempt Compounds	
GRAPHIC ART MATERIAL	Current Limit (g/L)
Adhesive	150
Coating	300
Flexographic Fluorescent Ink	300
Flexographic Ink: Non-Porous Substrate	300
Flexographic Ink: Porous Substrate	225
Gravure Ink	300
Letterpress Ink	300
Offset Lithographic Ink	300

(2) VOC Content of Fountain Solution

(A) No person shall apply any fountain solution, including any VOC-containing materials added to the original fountain solution for use in a graphic arts operation within the District unless the VOC content in the fountain solution, as applied, complies with the applicable VOC limits set-forth in the Table of Standards II below.

TABLE OF STANDARDS II

VOC CONTENT LIMITS Grams of VOC Per Liter of Material		
FOUNTAIN SOLUTION	1/1/2000 g/L	7/1/2014 g/L
Heatset Web-Fed		
Using Alcohol without Refrigerated Chiller	80	16
Using Alcohol with Refrigerated Chiller	100	30
Using Alcohol Substitute	80	50
Sheet-Fed		
Using Alcohol without Refrigerated Chiller	80	50
Using Alcohol with Refrigerated Chiller	100	85
Using Alcohol Substitute	80	50
Non-Heatset Web-Fed		
Using Alcohol Substitute without Refrigerated Chiller	80	50
Using Alcohol Substitute with Refrigerated Chiller		

(B) The use of alcohol containing fountain solutions is prohibited for use in non-heatset web-fed operations.

(3) Solvent Cleaning Operations; Storage and Disposal of VOC-containing Materials

Solvent cleaning operations and the storage and disposal of VOC-containing materials used in cleaning operations are subject to the provisions of Rule 1171 - Solvent Cleaning Operations.

(4) Prohibition of Storage

Effective July 1, 2014, a person shall not store any graphic arts material at a worksite for use in the District which contains VOC in the excess of the VOC-content limits specified in paragraph (c)(1).

(5) Approved Emission Control System

A person may comply with the provisions of paragraph (c)(1) or (c)(2) by using an emission control system to reduce VOC emissions provided such system is first approved in writing by the Executive Officer and meets the following requirements:

(A) The control device reduces VOC emissions from an emissions collection system by at least 95 percent, by weight, or the output of the air pollution control device is no more than 50 PPM by volume calculated as carbon with no dilution; and

(B) The owner/operator demonstrates that the emission collection system collects at least 90 percent, by weight, of the VOC emissions generated by the sources of emissions.

(6) Alternative Emission Control Plan

A person may comply with the provisions of paragraphs (c)(1) or (c)(2) by means of an approved Alternative Emission Control Plan pursuant to Rule 108 - Alternative Emission Control Plans.

(d) Prohibition of Specification and Sale

(1) No person shall solicit from, or require any other person to use in the District any graphic arts material which, when applied as supplied or thinned or reduced according to the manufacturer's recommendation for application, does not meet the applicable VOC limits in paragraph (c)(1) or subparagraph (i)(4)(C) for the specific application.

(2) No person shall supply, offer for sale, sell, market, blend, package, repackage, manufacture or distribute, to an end-user any graphic arts material for use in the District which, when applied as supplied or thinned or reduced according to the manufacturer's recommendation for application, does not meet the applicable VOC limits in paragraph (c)(1) or subparagraph (i)(4)(C) for the specific application.

(3) The prohibition of sales and use as specified in paragraphs (d)(1) and (d)(2) shall not apply to any manufacturer of graphic arts materials, provided that the manufacturer has complied with the labeling requirements of 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 Rule 1130.

(e) Recordkeeping and Reporting Requirements

Records shall be maintained pursuant to Rule 109. For emissions reporting purposes, the following substrate retention factors shall be applied to the lithographic oil content of the inks: 20 percent retention for heatset inks and 95 percent retention for non-heatset inks.

(f) Rule 442 Applicability

Any graphic arts operations exempted from all or a portion of the VOC limits of this rule shall comply with the provisions of Rule 442 – Usage of Solvents.

(g) Emission Reduction Credits

Facilities that use matte finish and metallic inks 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 300 grams per liter, less water and less exempt compounds irrespective of the VOC limits specified in paragraph (i)(4)(C).

(h) Test Methods

(1) VOC Content of Graphic Arts Materials

The VOC content of graphic arts materials except publication rotogravure inks shall be determined by:

(A) United States Environmental Protection Agency (U.S. EPA) Reference Test 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's (SCAQMD) Laboratory Test Method 302 (Distillation of Solvents from Paints, Coatings and Inks) and 303 (Determination of Exempt Compounds) contained in SCAQMD's "Laboratory Methods of Analysis for Enforcement Samples" manual; or

(B) SCAQMD Test Method 304 [Determination of Volatile Organic Compounds (VOCs) in Various Materials] contained in SCAQMD's "Laboratory Methods of Analysis for Enforcement Samples" manual.

(2) VOC Content and Density of Publication Rotogravure Ink:

The VOC content and density of publication rotogravure inks shall be determined by:

(A) U.S. EPA Reference Test Method 24A, (Determination of Volatile Matter Content and Density of Publication Rotogravure Inks and Related Publication Rotogravure Coatings, Code of Federal Regulations Title 40, Part 60, Appendix A). The exempt compounds' content shall be determined by SCAQMD's Laboratory Test Method 303 (Determination of Exempt Compounds) contained in SCAQMD's "Laboratory Methods of Analysis for Enforcement Samples" manual; or

(B) SCAQMD Test Method 304 [Determination of Volatile Organic Compounds (VOCs) in Various Materials] contained in SCAQMD's "Laboratory Methods of Analysis for Enforcement Samples" manual.

(3) 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 subdivision (c) and subparagraph (i)(4)(C), only when manufacturers specify which individual compounds are used in the ink and coating formulations. In addition, the manufacturers must identify U.S. EPA, CARB, and SCAQMD approved test methods, which can be used to quantify the amount of each exempt compound.

(4) Determination of Efficiency of Emission Control Systems

(A) The capture efficiency of an emission control system as specified in paragraph (b)(5) shall be determined by the procedures presented in U.S. EPA technical guideline document, "Guidelines for Determining Capture Efficiency, January 9, 1995". Notwithstanding the test methods specified by the Guidelines, any

other method approved by the U.S. EPA, CARB and the SCAQMD Executive Officer may be substituted.

(B) The efficiency of the control device of the emission control system as specified in paragraph (b)(6) and the VOC content in the control device exhaust gases, measured and calculated as carbon, shall be determined by U.S. 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. U.S. EPA Test Method 18, or CARB Method 422 shall be used to determine emissions of exempt compounds.

(5) Equivalent Test Methods

Other test methods determined to be equivalent by the Executive Officer, CARB, and the U.S. EPA, and approved in writing by the District Executive Officer may also be used.

(6) 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.

(7) Test Methods Dates

All test methods referenced in this subdivision shall be the most recently approved version by the appropriate governmental entities.

(i) Exemptions

(1) The provisions of this rule shall not apply to:

(A) Fountain solutions used on proof presses.

(B) Coating operations subject to other rules of Regulation XI.

(C) Solar-control window film.

(D) Heat-applied transfer decals.

(E) Graphic arts on ceramic materials.

(F) Circuitry printing.

(G) Blanket repair material used in containers of four ounces or less.

(H) Sterilization indicating inks.

(I) Aerosol coating products.

(J) Graphic arts materials that have a VOC content of no more than 10 g/L or its equivalent, less water and less exempt compounds, as applied.

(2) The prohibition specified in paragraphs (d)(1) or (d)(2) shall not apply to persons offering graphic arts materials for sale to, selling graphic arts materials to, distributing graphic arts materials to, or requiring the use of graphic arts materials from, persons who are operating an approved emission control system under paragraph (c)(5), or complying under paragraph (c)(6), or operating pursuant to paragraphs (i)(1), (i)(4), (i)(5) or (i)(6).

(3) The prohibition specified in subdivision (d) shall not apply to graphic arts materials which will be used solely outside of the District.

(4) The provisions of paragraph (c)(1) shall not apply to metallic and matte finish inks provided that:

(A) The usage of matte finish or metallic inks each as supplied shall not exceed two (2) gallons on any one day and 125 gallons per calendar year at a facility; and

(B) The potential to emit and the actual VOC emissions from a facility which applies matte finish or metallic inks does not exceed ten (10) tons per calendar year from all VOC emission sources; and

(C) The VOC content of matte finish and metallic inks do not exceed 535 and 460 grams per liter (less water and less exempt compounds) respectively, including any VOC containing materials added to the original ink, as applied; and

(D) The owner or operator of the facility certifies in writing to the Executive Officer that they shall not emit VOCs in excess of ten (10) tons per calendar year. Such a certification shall be considered an agreement by the facility to limit the facility's potential to emit.

(5) Facilities operating under the provisions of paragraph (i)(4) whose actual emissions exceed ten (10) tons in any calendar year shall:

(A) henceforth be subject to the requirements of paragraph (c)(1).

(B) In addition to the requirements of subdivision (e), facilities shall retain records of purchase orders and invoices of VOC-containing materials for a minimum of five (5) years.

(6) The provision of paragraph (c)(4) shall not apply to a worksite that stores graphic arts materials provided such graphic arts materials are vented exclusively to printing systems equipped with an approved emission control system pursuant to the requirements of paragraph (c)(5).

(7) The provisions of paragraph (c)(1) shall not apply to postal cancellation inks provided the VOC emissions from these inks, at a facility, do not exceed 60 pounds per calendar month.

(8) The provisions of paragraph (c)(2) shall not apply to sheet-fed offset presses that have a sheet size no larger than 11 inches by 17 inches, or any offset press if the total solution reservoir capacity is one gallon or less, provided the VOC content of the fountain solution used contains no more than 80 grams per liter of material, as applied, or if using a refrigerated chiller, no more than 100 grams per liter of material, as applied.

(Adopted September 15, 2000)(Amended June 6, 2003)

RULE 1131. FOOD PRODUCT MANUFACTURING AND PROCESSING OPERATIONS

(a) Purpose and Applicability

The purpose of this rule is to reduce emissions of Volatile Organic Compounds (VOCs) from solvents used in food product manufacturing and processing operations. This rule applies to any person using solvents in any food product manufacturing and processing operation except food supplements in tablet or capsule form.

(b) Definitions

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

(1) BREWERY is a facility that manufactures malt liquors, including but not limited to beers and ales, using a steeping, boiling and fermentation process or an infusion and fermentation process.

(2) DEEP-FAT FRYING is the cooking of any food product by immersion in hot fat or oil.

(3) DISTILLERY is a facility that manufactures alcoholic beverages, including but not limited to whiskey, rum, tequila, vodka, gin, brandy, and liqueurs, using a distillation process.

(4) EXEMPT COMPOUND is as defined in Rule 102.

(5) FACILITY means a business or businesses engaged in food product manufacturing and processing operations which are owned or operated by the same person or persons and are located on the same or contiguous parcels.

(6) FOOD PRODUCT is any material consisting of any combination of proteins, carbohydrates, and fats, and is intended for human consumption. Colorings, flavorings, spices, and extracts or any other additive contained in such a material is considered to be a food product.

(7) FOOD PRODUCT MANUFACTURING AND PROCESSING OPERATION is any activity or equipment used in the production, formulation, or configuration of any food product. Such manufacturing and processing operations include, but are not limited to distillation,

extraction, reacting, blending, drying, crystallizing, granulating, separation, sterilization, and filtering.

(8) FOOD SUPPLEMENT is any vitamin or herb in tablet or capsule form, and is ingested into the human body to provide additional nutritional benefits than those provided by food products alone. Food bars and powdered drink mixes shall not be considered to be food supplements.

(9) 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:	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

(10) LIQUID LEAK is the dripping of liquid volatile organic compounds at the rate of more than three drops per minute or any visible liquid mist.

(11) 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.

(12) SOLVENT is any liquid VOC-containing material.

(13) SOLVENT CLEANING is the removal of loosely held uncured adhesives, uncured inks, uncured coatings, and contaminants which include but is not limited to dirt, soil, and grease from parts, products, tools, machinery, equipment, and general work areas.

(14) STERILIZATION is a process or operation that removes or prevents the growth of bacteria and other living microorganisms.

(15) VOLATILE ORGANIC COMPOUND (VOC) is as defined in Rule 102.

(16) WINERY is a facility that manufactures wine or champagne using a fermentation process.

(c) Requirements

(1) Effective October 1, 2002, a person shall not use solvents in any food product manufacturing or processing operation, except sterilization processes, unless one of the following is met:

(A) the VOC content of each solvent used in such operations does not exceed 120 grams of VOC per liter of material; or

(B) a VOC emission control system, consisting of a collection device that collects 90 percent, by weight, of the emissions generated from the food product manufacturing equipment or operation, and a control device that removes 95 percent, by weight, of the collected emissions.

(2) A person shall not use solvents for the sterilization of food manufacturing and processing equipment unless:

(A) the solvent contains no more than 400 grams of VOC per liter of material, effective October 1, 2002.

(B) the solvent contains no more than 200 grams of VOC per liter of material, effective October 1, 2005.

In lieu of meeting the VOC limits specified in these subparagraphs, a person may comply by using a VOC emission control system that meets the requirements of subparagraph (c)(1)(B).

(3) Effective upon adoption of this rule, a person shall not operate equipment used in food product manufacturing and processing operations unless the equipment is free of liquid leaks, visible tears, or cracks that result in VOC emissions to the atmosphere. In addition, the person shall repair any liquid leak, visible tear, or crack detected pursuant to the provisions of this subparagraph within 48 hours, or the person shall drain the equipment of all solvent and shut down until replaced or repaired.

(4) Effective upon adoption of this rule, a person shall carry out solvent cleaning, excluding sterilization, of equipment, parts, products, tools, machinery, equipment, general work areas, and the storage and disposal of VOC-containing materials used in cleaning operations, pursuant to Rule 1171 – Solvent Cleaning Operations.

(d) Recordkeeping Requirements

(1) A person shall maintain records pursuant to Rule 109 for all solvents used in food product manufacturing and processing operations.

(2) A person shall maintain records for the detection of any liquid leak, visible tear, or crack referenced in paragraph (c)(2). The records shall include, at a minimum, the following:

(A) the date and time the leak, tear, or crack was detected;

(B) specific identification of the equipment associated with the leak, tear, or crack;

(C) the date and time the leak, tear, or crack was repaired.

Such records shall be retained for two years and shall be made available at the request of the Executive Officer or his representative.

(e) Test Methods

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 United States Environmental Protection Agency, and approved in writing by the District Executive Officer may also be used.

(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 (U.S. EPA) 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,

(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 subdivision (c), only when manufacturers specify which individual compounds are used in the solvent formulation and 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 Presence of VOC in Solvents

The presence of VOC in the headspace over the cleaning material shall be determined by SCAQMD Method 313 [Determination of Presence of Volatile Organic Compounds (VOC) in a Headspace] contained in the SCAQMD "Laboratory Methods of Analysis for Enforcement Samples" manual.

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.

(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)(B) shall be determined by the U.S. EPA method cited in 55 Federal Register 26865, June 29, 1990, or any other alternative 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 as specified in subparagraph (c)(1)(B) and the VOC content in the control device exhaust gases, measured and calculated as carbon, shall be determined by U.S. EPA Test Methods 25, 25A or SCAQMD Method 25.1 (Determination of Total Gaseous Non-Methane Organic Emissions as Carbon) as applicable. U.S. EPA 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 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.

(5) All test methods referenced in this section shall be the most recently approved version.

(f) Rule 442 Applicability

Any solvent which is exempt from all or a portion of this rule shall be subject to the applicable requirements of the applicable Regulation XI source specific rule. If there is no applicable Regulation XI source specific rule, the solvent shall be subject to Rule 442 - Usage of Solvent.

(g) Exemptions

(1) The provisions of this rule, except paragraphs (c)(2) and (d)(1), shall not apply to:

(A) any person or facility with total aggregate VOC emissions less than 440 pounds in any calendar month from all food product manufacturing and processing operations subject to this rule.

(B) Operations exclusively using solvents containing no more than 50 grams of VOC per liter of material.

(2) The provisions of this rule shall not apply to the following:

(A) Deep-fat frying operations.

(B) Operations conducted at breweries, wineries, or distilleries.

(C) Equipment subject to Rule 472 – Reduction of Animal Matter.

(D) The production of food supplements as defined in paragraph (b)(8) of the rule. Such food supplements shall be subject to Rule 1103 – Pharmaceuticals and Cosmetics Manufacturing Operations. The manufacturing and production of all other food supplement products are subject to the requirements of this rule.

(E) Operations subject to Rule 1138 – Control of Emissions from Restaurant Operations.

(F) Operations subject to Rule 1153 – Commercial Bakery Ovens. Records shall be maintained pursuant to paragraph (d)(1) for solvents used for the sterilization of equipment exempted in this paragraph.

(3) Operations exclusively using solvents containing no more than 50 grams of VOC per liter of material are not subject to any provision of this rule.

(Adopted January 19, 2001)(Amended March 5, 2004)(Amended May 7, 2004)
(Amended May 5, 2006)

RULE 1132. FURTHER CONTROL OF VOC EMISSIONS FROM HIGH-EMITTING SPRAY BOOTH FACILITIES

(a) Purpose and Applicability

The purpose of this rule is to further reduce volatile organic compound (VOC) emissions from spray coating or laminating operations in high VOC-emitting facilities. This rule applies to any spray booth facility, except petroleum industry facilities, that uses VOC-containing materials that amount to more than 40,000 pounds (20 tons) per year of VOC emissions in any emission inventory year beginning in 1999. Except when a specific exemption applies, the facilities subject to this rule shall continue to comply with other rules that are applicable to the same operation.

(b) Definitions

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

(1) APPROVED EMISSION FACTORS are those emission factors identified in the Unified Emission Factors (UEFs) table for Open Molding of Composites which was published in July 23, 2001, included as Attachment A of this rule excluding the "Gelcoat Non-Atomized Application" emission factors, or any subsequent emission factors developed for open molding of composites that have been approved by the Executive Officer, the Executive Officer of the California Air Resources Board or designee, and the administrator of the United States Environmental Protection Agency or designee.

Deleted:

(2) CAPTURE SYSTEM is an arrangement of devices such as enclosures, plenums, fans and ductworks used to collect VOC-laden air from the process area and direct it to the control equipment.

(3) COMPOSITE MATERIAL is comprised of a gel coat, resin and reinforcement element combined in a thermosetting polymer matrix which is chemically or mechanically bonded.

(4) COMPOSITE MANUFACTURING FACILITY is any facility engaged in the manufacturing of products using composite material.

Deleted: .

(5) EMISSION CONTROL SYSTEM is a combination of capture system(s) and control equipment used to reduce, eliminate or control the release of VOC to the atmosphere.

(6) EMISSION INVENTORY YEAR is the annual emission reporting period beginning from July 1 of the previous year through June 30 of a given year. For example, emission inventory year 1999 covers the period from July 1, 1998 through June 30, 1999.

(7) EXCESS EMISSION REDUCTIONS are VOC emission reductions that are not required by any other District requirement as of January 19, 2001. Excess emission reductions also include any reductions achieved on or after January 19, 2001 in excess of the requirements of subdivision (c) resulting from a process change subject to best available control technology (BACT) as specified in Regulation XIII and implemented solely for the purpose of complying with this rule.

(8) FACILITY is any equipment or group of equipment or other VOC-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.

(9) GEL COAT is a thermosetting resin surface coating, either pigmented or clear, that provides a cosmetic enhancement and improves resistance to degradation from exposure to the elements.

(10) NONATOMIZED APPLICATION is any resin application technology in which the resin is not broken into droplets or an aerosol as it travels from the application equipment to the surface of an object. Nonatomized application technology includes, but is not limited to, flowcoaters, flow choppers, pressure-fed rollers, resin impregnators, and hand applications using a brush or roller.

(11) PETROLEUM INDUSTRY FACILITY is any facility primarily engaged in the production, refining, storage, transfer or distribution of crude petroleum or petroleum products as defined in the Standard Industrial Classification for crude petroleum and natural gas (SIC code 1311),

petroleum refining (SIC code 2911), petroleum bulk stations and terminals (SIC code 5171), or other related industries (e.g., SIC codes 4226, 4612, 4613, 4923 and 5541).

(12) RESIN is any thermosetting polymer used to encapsulate and bind together reinforcement fibers in the manufacturing of composites.

(13) SPRAY BOOTH is any equipment or enclosure used to capture or reduce overspray from the application of any coating, lamination, or other VOC-containing materials, that requires a permit from the District. A spray booth includes standard bench type, floor type, and automotive type spray booths, as well as prep stations, spray stations (i.e., a bank of filters with a plenum and exhaust fan), and spray rooms.

(14) SPRAY BOOTH FACILITY is any facility that has installed one or more spray booths. A facility subject to a District rule or regulation that requires installation of any spray booth is also considered as a spray booth facility.

(15) VOC-CONTAINING MATERIAL is any material that contains VOC including, but not limited to, resins, polymers, gel coats, coatings, paints, varnishes, stains, sealers, thinners, cleanup solvents, thinning solvents, inks, fountain solutions, adhesives, and sealants. VOC-containing materials do not include fuels or combustion products.

(16) VOLATILE ORGANIC COMPOUNDS (VOC) are as defined in Rule 102.

(c) Requirements

On or after the effective date specified in paragraph (e)(1), a person shall not operate any spray booth facility subject to this rule, unless the VOC emissions from any equipment, activity or operation that applies, or is required by any District rule, regulation or permit to apply, VOC-containing materials in a spray booth are reduced through the use of the following:

(1) An emission control system that has an overall efficiency of at least 65 percent by weight; or

(2) VOC-containing materials that have a VOC content at least 65 percent lower than any applicable rule limit in effect as of January 19, 2001; or

(3) A combination of methods specified in paragraphs (c)(1) and (c)(2), which when individually applied do not meet the specified reduction

requirement, but when combined reduce the VOC emissions by at least 65 percent by weight.

The Executive Officer shall impose conditions necessary to ensure continuous compliance. In no event shall the compliance determination period exceed a monthly basis.

(d) Alternative Compliance Plan

The operator of a spray booth facility that reported more than 20 tons per year of VOC emissions in any emission inventory year of 1999 or thereafter, may, in lieu of complying with the requirements of subdivision (c) and the effective dates specified in paragraph (e)(1), comply with an alternative compliance plan that is submitted to and approved by the Executive Officer. The Executive Officer shall not approve an alternative compliance plan, unless the plan has demonstrated real, quantifiable and verifiable excess emission reductions through one of the following:

(1) Any combination of facility-wide measures at a composite manufacturing facility that reduces VOC emissions by at least 65 percent effective July 1, 2004, from what would be emitted based on Rule 1162 requirements in effect as of January 19, 2001, usage factors and approved emission factors, demonstrated by use of the following equation:

$$\text{Percent VOC Reduction} = \frac{\left[\sum_{i=1}^{a} f_i U_i + \sum_{j=1}^{b} f_j U_j\right] - \left[\sum_{k=1}^{c} f_k U_k + \sum_{l=1}^{d} f_l U_l\right]}{\sum_{i=1}^{a} f_i U_i + \sum_{j=1}^{b} f_j U_j} \times 100$$

where,

U_i = the approved emission factor for the ith resin based on the allowable monomer content of Rule 1162 as of January 19, 2001, and the allowable method of resin application and associated vapor suppressants and roll-out and covered-cure used as of January 19, 2001.

U_j = the approved emission factor for the jth gel coat based on the allowable monomer content of Rule 1162 as of January 19, 2001, and the allowable method of gel coat application used as of January 19, 2001.

U_k = the approved emission factor for the kth resin based on the actual monomer content and the actual method of resin application and any associated vapor suppressants and roll-out and covered-cure currently used.

U_l = the approved emission factor for the lth gel coat based on the actual monomer content and the actual gel coat application for each gel coat currently used, excluding the gel coat nonatomizing emission factor.

f_i = usage factor, based on the fraction of the ith resin used to the total facility usage of all resins and gel coats during the twelve-month period prior to January 19, 2001, as a monthly average.

f_j = usage factor, based on the fraction of the jth gel coat used to the total facility usage of all resins and gel coats during the twelve-month period prior to January 19, 2001, as a monthly average.

f_k = usage factor, based on the fraction of the kth resin used to the total facility usage of all resins and gel coats during the latest twelve-month period, calculated as a monthly average.

f_l = usage factor, based on the fraction of the lth gel coat used to the total facility usage of all resins and gel coats during the latest twelve-month period, calculated as a monthly average.

Effective January 1, 2002, the composite manufacturing facility shall comply with all of the following:

(A) Nonatomized application shall be used for all resin applications;

(B) Clear gel coat shall contain no more than 44 percent by weight of monomers, as applied;

(C) White and off-white pigmented gel coat shall contain no more than 30 percent by weight of monomers, as applied; and

(D) Non-white pigmented gel coat shall contain no more than 37 percent by weight of monomers, as applied.

(2) Effective December 31, 2004, use of VOC-containing materials that have a VOC content at least 85 percent lower than any applicable rule limit in effect as of January 19, 2001, emission control systems that have an overall efficiency at least 85 percent by weight, or a combination thereof that achieves an overall reduction of 85 percent by weight, for each spray

booth except those qualified for exemption as specified in paragraphs (h)(2) and (h)(3); or

(3) Any combination of facility wide measures that reduces VOC emissions equivalent to that required under subdivision (c) on or before the effective date specified in paragraph (e)(1) provided the measures are approved in writing by the Executive Officer, CARB and USEPA. The spray booth facility shall comply with the USEPA Economic Incentive Programs (EIP) guidelines, if applicable.

The Executive Officer shall impose conditions necessary to ensure continuous compliance. In no event shall the compliance determination period exceed a monthly basis.

(e) Compliance Schedule

(1) The effective dates of the requirements in subdivision (c) shall be as follows:

(A) July 1, 2003, for spray booth facilities emitting more than 100,000 pounds (50 tons) of VOC in emission inventory year 1999 or 2000.

(B) July 1, 2004, for spray booth facilities emitting up to and including 100,000 pounds (50 tons) of VOC in emission inventory year 1999 or 2000.

(C) For all other spray booth facilities, July 1, 2004, or 30 months after the applicable VOC emissions from the facility have exceed 40,000 pounds (20 tons) for an emission inventory year after 2000, whichever is later.

(2) Except as indicated in subparagraph (C) below, no later than 18 months prior to the applicable compliance date pursuant to paragraph (e)(1), the operator of a facility subject to this rule shall submit to the Executive Officer:

(A) Complete application(s) for permit(s) to construct and operate for any modifications or new installations required to comply with this rule and for which the permit(s) is (are) required pursuant to Rules 201 and 203;

(B) A change of condition application for each spray booth employing the compliance method pursuant to paragraph (c)(2) or (c)(3) by switching to lower VOC content materials; and

(C) If the operator elects to comply with the alternative compliance plan pursuant to subdivision (d), a complete plan application in accordance with Rule 306 – Plan Fees, including a description of how compliance is to be achieved shall be filed no later than May 1, 2004, for spray booth facilities with a compliance schedule of July 1, 2004, pursuant to subparagraph (e)(1)(C), or no later than 12 months after the applicable VOC emissions exceeded 40,000 pounds (20 tons) at a spray booth facility for an emission inventory year after 2000.

(f) Test Methods and Procedures

The following test methods and procedures shall be used to determine compliance with this rule. All test methods referenced below shall be the most recent version issued by the respective organization. Alternative test methods may be used if they are determined to be equivalent and approved in writing by the Executive Officer, the California Air Resources Board, and the U.S. Environmental Protection Agency.

(1) Determination of VOC Content of VOC-Containing Materials:

(A) US EPA Method 24 - Determination of volatile matter content, water content, density, volume solids and weight solids of surface coatings

(B) US EPA Method 24A - Determination of volatile matter content and density of printing inks and related coatings

(C) District Method 303 - Determination of Exempt Compounds

(D) District Method 304 - Determination of Volatile Organic Compounds (VOCs) in Various Materials

(E) District Method 313 – Determination of Volatile Organic Compounds by Gas Chromatography/Mass Spectrometry

(2) Determination of Efficiency of Emission Control Systems:

(A) The capture efficiency of an emission control system shall be determined by verifying the use of a Permanent Total Enclosure (PTE) and 100% capture efficiency as defined by US EPA Method 204, "Criteria for and Verification of a Permanent or Temporary Total Enclosure." Alternatively, if a US EPA Method 204 defined PTE is not employed, capture efficiency shall be determined using a minimum of three sampling runs subject to data quality criteria

presented in the US EPA technical guidance document "Guidelines for Determining Capture Efficiency, January 9, 1995." Individual capture efficiency test runs subject to the US EPA technical guidelines shall be determined by:

(i) The Temporary Total Enclosure (TTE) approach of US EPA Methods 204 through 204F; or

(ii) The District "Protocol for Determination of Volatile Organic Compounds (VOC) Capture Efficiency."

(B) The control equipment 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, District Method 25.1 - Determination of Total Gaseous Non-Methane Organic Emissions as Carbon, or District Method 25.3 – Determination of Low Concentration Non-Methane Non-Ethane Organic Compound Emissions from Clean Fueled Combustion Sources, as applicable. US EPA Test Method 18 or ARB Method 422 shall be used to determine emissions of exempt compounds.

(C) The overall efficiency of an emission control system shall be determined using the following equation (all efficiencies expressed in percent):

Overall Efficiency =
(Capture Efficiency) x (Control Equipment Efficiency)/100

(3) Multiple Test Methods

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 Executive Officer. In addition, 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) Laboratory Approval

The sampling, analysis, and reporting shall be conducted by a laboratory that has been approved under the District Laboratory Approval Program (LAP) for the cited District reference test methods, where LAP approval is

available. For District reference test methods for which no LAP program is available, the LAP approval requirement shall become effective one year after the date that the LAP program becomes available for that District reference test method.

(g) Monitoring, Recordkeeping and Reporting Requirements

(1) No later than 180 days after the effective date of the requirements, the operator of a facility who elects to install an emission control system to comply with all or part of the rule requirements shall conduct performance testing to determine the overall efficiency of the emission control system and submit a complete test report to the Executive Officer. The performance testing of the emission control system shall be repeated when the system is modified or an operating parameter is changed in a manner that affects the capture or control efficiency. In such case, the affected capture or control efficiency testing shall be conducted and the test report submitted to the Executive Officer within 180 days after the modification. The Executive Officer may require more frequent performance testing, as necessary.

(2) The operator of a facility subject to this rule shall submit an initial compliance certification report to the Executive Officer no later than 180 days after the effective date of the requirements. The operator shall then submit subsequent compliance certification reports annually within 60 days after the end of each emission inventory year. The initial and annual compliance certification reports shall include the performance testing report (if applicable), inventory of materials used, and other procedures and information, as necessary to determine compliance with the applicable requirements or exemptions.

(3) The operator shall, at a minimum, maintain the following records for a period of at least two years, or five years for facilities subject to Title V Permit requirements, and make the records available to the Executive Officer upon request:

(A) Purchase records, or equivalent records as approved by the Executive Officer, for all VOC-containing materials used in the facility;

(B) Records of VOC-containing materials in accordance with Rule 109 – Recordkeeping for Volatile Organic Compound Emissions;

(C) Records on the system operating and maintenance parameters as applicable with any emission control system. At a minimum, the operator shall maintain records of the parameters necessary to demonstrate continuous operation and compliance of the emission control system during periods of emission producing activities. These parameters shall include, but are not limited to, temperatures, pressures, and flow rates; and

(D) All measurements, process information, material data, test data, and other related information used in or required to support the emission determinations for compliance demonstration.

(h) Exemptions

The requirements of subdivision (c) shall not apply to the following:

(1) A facility that has applied for and been issued by the Executive Officer an enforceable permit condition that limits the facility-wide VOC emissions from the use of VOC-containing materials to no more than 40,000 pounds (20 tons) per emission inventory year. The operator must submit complete application(s) for change of permit conditions no later than 18 months prior to the applicable compliance date pursuant to paragraph (e)(1) and comply with the facility-wide emissions limit beginning on the applicable effective date pursuant to paragraph (e)(1).

(2) A spray booth that meets the following condition:

Exhaust Flow Rate (standard cubic feet per minute)	Allowable VOC Emissions (pounds per day)
Less than 10,000	12
10,000 or greater but less than 30,000	25
30,000 or greater but less than 60,000	50
60,000 or greater but less than 90,000	100
90,000 or greater but less than 275,000	150
275,000 or greater	225

If at any time the exhaust flow rate falls in a lesser category, except during equipment malfunction, maintenance or repairs for a period not to exceed 72 hours per occurrence, the allowable VOC emissions of that lesser category shall apply. The allowable VOC emissions shall be determined based on the monthly average of the past calendar month, calculated by

dividing the total emissions from the spray booth for the month by the number of calendar days in the month. The operator of a spray booth that meets the above conditions shall submit to the Executive Officer a change of condition application for each spray booth employing this exemption by September 5, 2004, or no later than 18 months prior to the applicable compliance date pursuant to subparagraph (e)(1)(C), whichever is later.

(3) A spray booth for which the VOC emissions are reduced through the use of an existing emission control system in operation under a valid District permit as of December 1, 2000, that is not mandatory pursuant to any other District requirement or the requirement of any other governmental agency. This exemption is valid only for facilities that are subject to the alternative compliance plan specified in paragraph (d)(2).

ATTACHMENT A

Unified Emission Factors for Open Molding of Composites

July 23, 2001

Emission Rate in Pounds of Styrene Emitted per Ton of Resin or Gelcoat Processed

Styrene content in resin/gelcoat, % [1]	<33 [2]	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	>50 [2]
Manual	0.126 x %styrene x 2000	83	89	94	100	106	112	117	123	129	134	140	146	152	157	163	169	174	180	((0.286 x %styrene) - 0.0529) x 2000
Manual w/ Vapor Suppressed Resin VSR [3]	**Manual emission factor** [listed above] x (1 - (0.50 x specific VSR reduction factor for each resin/suppressant formulation))																			
Mechanical Atomized	0.169 x %styrene x 2000	111	126	140	154	168	183	197	211	225	240	254	268	283	297	311	325	340	354	((0.714 x %styrene) - 0.18) x 2000
Mechanical Atomized with VSR [3]	**Mechanical Atomized emission factor** [listed above] x (1 - (0.45 x specific VSR reduction factor for each resin/suppressant formulation))																			
Mechanical Atomized Controlled Spray [4]	0.130 x %styrene x 2000	86	97	108	119	130	141	152	163	174	185	196	207	218	229	240	251	262	273	0.77 x ((0.714 x %styrene) - 0.18) x 2000
Mechanical Controlled Spray with VSR	**Mechanical Atomized Controlled Spray emission factor** [listed above] x (1 - (0.45 x specific VSR reduction factor for each resin/suppressant formulation))																			
Mechanical Non-Atomized	0.107 x %styrene x 2000	71	74	77	80	83	86	89	93	96	99	102	105	108	111	115	118	121	124	((0.157 x %styrene) - 0.0165) x 2000
Mechanical Non-Atomized with VSR [3]	**Mechanical Non-Atomized emission factor** [listed above] x (1 - (0.45 x specific VSR reduction factor for each resin/suppressant formulation))																			
Filament application	0.184 x %styrene x 2000	122	127	133	138	144	149	155	160	166	171	177	182	188	193	199	204	210	215	((0.2746 x %styrene) - 0.0298) x 2000
Filament application with VSR [5]	0.120 x %styrene x 2000	79	83	86	90	93	97	100	104	108	111	115	118	122	125	129	133	136	140	0.65 x ((0.2746 x %styrene) - 0.0298) x 2000
Gelcoat Application	0.445 x %styrene x 2000	294	315	336	356	377	398	418	439	460	481	501	522	543	564	584	605	626	646	((1.03646 x %styrene) - 0.195) x 2000
Gelcoat Controlled Spray Application [4]	0.325 x %styrene x 2000	215	230	245	260	275	290	305	321	336	351	366	381	396	411	427	442	457	472	0.73 x ((1.03646 x %styrene) - 0.195) x 2000
Gelcoat Non-Atomized Application [8]	SEE **Note 9** below	196	205	214	223	232	241	250	259	268	278	287	296	305	314	323	332	341	350	((0.4506 x %styrene) - 0.0505) x 2000
Covered-Cure after Roll-Out	**Non-VSR process emission factor** [listed above] x (0.80 for Manual <or> 0.85 for Mechanical)																			
Covered-Cure without Roll-Out	**Non-VSR process emission factor** [listed above] x (0.50 for Manual <or> 0.55 for Mechanical)																			

Emission Rate in Pounds of Methyl Methacrylate Emitted per Ton of Gelcoat Processed

MMA content in gelcoat, % [6]	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	≥20
Gel coat application [7]	15	30	45	60	75	90	105	120	135	150	165	180	195	210	225	240	255	270	285	0.75 x %MMA x 2000

Notes

1 Including styrene monomer content as supplied, plus any extra styrene monomer added by the molder, but before addition of other additives such as powders, fillers, glass,...etc.

2 Formulas for materials with styrene content < 33% are based on the emission rate at 33% (constant emission factor expressed as percent of available styrene), and for styrene content > 50% on the emission rate based on the extrapolated factor equations; these are not based on test data but are believed to be conservative estimates. The value for "% styrene" in the formulas should be input as a fraction. For example, use the input value 0.30 for a resin with 30% styrene content by wt.

3 The VSR reduction factor is determined by testing each resin/suppressant formulation according to the procedures detailed in the ***CFA Vapor Suppressant Effectiveness Test***.

4 SEE the ***CFA Controlled Spray Handbook*** for a detailed description of the controlled spray procedures.

5 The effect of vapor suppressants on emissions from filament winding operations is based on the ***Dow Filament Winding Emissions Study.***

6 Including MMA monomer content as supplied, plus any extra MMA monomer added by the molder, but before addition of other additives such as powders, fillers, glass,...etc.

7 Based on gelcoat data from ***NMMA Emission Study.***

8 SEE the July 17, 2001 EECS report ***Emission Factors for Non-Atomized Application of Gel Coats used in the Open Molding of Composites*** for a detailed description of the non-atomized gelcoat testing.

9 Use the equation **((0.4506 x %styrene) - 0.0505) x 2000** for gelcoats with styrene contents between 19% and 32% by wt.; use the equation **0.185 x %styrene x 2000** for gelcoats with less than 19% styrene content by wt.

UEF unified factors table revised July 23 '01.xls

*Rule 1132 prohibits the use of the Gel Coat Non-Atomized Application emission rates to calculate emissions

(Adopted January 10, 2003)(Amended July 8, 2011)

RULE 1133.1 CHIPPING AND GRINDING ACTIVITIES

(a) Purpose

The purpose of this rule is to prevent inadvertent decomposition occurring during chipping and grinding activities, including stockpile operations.

(b) Applicability

This rule applies to operators of chipping and grinding activities to produce materials other than active or finished compost, unless otherwise exempted under subdivision (f) of this rule. The requirements of Rule 403 – Fugitive Dust, also apply to these activities.

(c) Definitions

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

(1) ACTIVE COMPOST is material that is in the process of being rapidly decomposed and is biologically unstable. Active compost is generating temperatures of at least 122 degrees Fahrenheit during decomposition. Active compost includes, but is not limited to, pathogen-reduced mulch.

(2) AGRICULTURAL CHIPPING AND GRINDING is any chipping and grinding activity conducted at an agricultural site where organic waste material is generated on-site by the production and/or processing of farm products, and the chipped and ground organic waste material is used on-site.

(3) CHIPPING AND GRINDING is any activity that mechanically reduces the size of greenwaste, woodwaste, and/or foodwaste.

(4) COMPOSTING is a process in which solid organic waste materials are decomposed in the presence of oxygen under controlled conditions through the action of bacteria and other microorganisms.

(5) COMPOST OVERS are the oversized woody materials that do not decompose in a typical composting cycle and are screened out of finished product at the end of composting. Compost overs have been through the pathogen reduction process outlined in Title 14, Section 17868.3 of the California Code of Regulations.

(6) CURBSIDE GREENWASTE is greenwaste that is collected from receptacles designated for residential household greenwaste. Curbside greenwaste also includes screened curbside greenwaste containing only grass clippings, leaves, and/or twigs that is not considered non-curbside greenwaste as defined in paragraph (c)(13).

(7) FINISHED COMPOST is a humus-like material and/or compost overs that result from the controlled biological decomposition of organic waste materials and is biologically stable.

(8) FOODWASTE is any food scraps collected from the food service industry, grocery stores, or residential food scrap collection. Foodwaste also includes food scraps that are chipped and ground.

(9) GREENWASTE is any organic waste material generated from gardening, agriculture, or landscaping activities including, but not limited to, grass clippings, leaves, tree and shrub trimmings, and plant remains. It includes curbside, non-curbside, and mixed greenwaste.

(10) INADVERTENT DECOMPOSITION is decomposition of greenwaste and/or foodwaste associated with stockpiling greenwaste and/or foodwaste for an extended period of time, and is not considered part of normal chipping and grinding operations.

(11) LANDCLEARING is an activity where trees and plants grown at the site are cut, then chipped or ground and removed from the site to clear the site.

(12) MIXED GREENWASTE is curbside greenwaste that is mixed with non-curbside greenwaste.

(13) NON-CURBSIDE GREENWASTE is any greenwaste that is not collected from receptacles designated for residential household greenwaste.

(14) PALM CHIPPING AND GRINDING is any activity that mechanically reduces the size of palm trees waste.

(15) PORTABLE CHIPPING AND GRINDING is chipping and grinding utilizing equipment with a manufacturer's rating of 170 brake horsepower or less.

(16) RAINY DAY is any day with at least 0.05 inches of rain reported by the National Weather Service or a cooperative weather reporting station for the site closest to where the chipping and grinding activity occurs.

(17) STOCKPILE is a supply of raw material tipped and stored prior to being utilized on-site or removed from the site. Raw materials before and after chipping and grinding are also included.

(18) WET WEATHER CONDITIONS are weather conditions following a rainy day not to exceed 10 days.

(19) WOODWASTE is lumber, and the woody material portion of mixed demolition wastes and mixed construction wastes. Woodwaste also includes large wood materials of curbside greenwaste or mixed greenwaste that is screened or unscreened, such as tree trimmings, branches, tree trunks, stumps, and limbs exceeding 2 inches in any dimension.

(d) Requirements

The operator of a chipping and grinding activity shall comply with the following requirements:

(1) Foodwaste shall not be taken at the facility, unless otherwise allowed by the Local Enforcement Agency to handle foodwaste.

(2) Chip or grind and utilize on-site or remove curbside, non-curbside, or mixed greenwaste from the site within 48 hours of receipt, excluding observance of official federal and state holidays, or up to seven days maximum, with approval from the Local Enforcement Agency.

(3) Maintain all the operational records for the prior five years of operation, with the most recent two years retained at the facility, which shall be immediately available upon request by the Executive Officer. The remaining three years of records shall be made available to the Executive Officer within one week of request.

(4) Maintain the following records, as applicable, on-site for two years:

(A) A copy of the facility's AQMD registration and annual updates submitted in compliance with Rule 1133;

(B) Records of date, type, and amount of greenwaste received;

(C) Records of date, type, amount of greenwaste removed from the site, and location where they are transferred to;

(D) Records of dates of rainy days and wet weather conditions and description of specific conditions that limited normal operations;

(E) Records of temperature or moisture content measurements; and

(F) Records of dates and amount of curbside greenwaste chipped and ground.

(5) The time requirements specified in paragraph (d)(2) may be extended by the number of rainy days and wet weather conditions that impede normal chipping and grinding operations provided that records are maintained in accordance with subparagraph (d)(4)(D).

(e) Moisture Content Measurement

Moisture content will be determined by collecting at least 10 samples of chipped and ground greenwaste from various locations of the pile at a depth of at least 12 inches below pile surface. The samples shall then be mixed thoroughly and analyzed for moisture content by ASTM method D4442 (December 2007), ASTM method D4444 (May 2008) or ASTM method E871-82 (December 2006).

(f) Exemptions

(1) Chipping and grinding activities of greenwaste derived from the site and utilized on-site shall be exempt from the requirements of paragraphs (d)(2), (d)(3), and (d)(4), provided less than 1,000 cubic yards of materials are either sold or given away.

(2) Portable chipping and grinding, agricultural chipping and grinding, land clearing chipping and grinding, woodwaste chipping and grinding, and palm chipping and grinding activities shall be exempt from the requirements of paragraphs (d)(2), (d)(3), and (d)(4).

(3) Chipped and ground curbside greenwaste shall be exempt from the requirements of paragraph (d)(2) provided that the moisture content is less than 30%, measured in accordance with subdivision (e) and the temperature or moisture content measurements are maintained on-site in accordance with subparagraph (d)(4)(E).

(4) A biomass power generation facility or a facility processing material as a biomass fuel for a biomass power generation facility shall be exempt from the requirements of paragraph (d)(2) provided that the material temperature is maintained at below 122 degrees Fahrenheit or the moisture content is less than 30%, measured in accordance with subdivision (e) and the temperature or moisture content measurements are maintained on-site

in accordance with subparagraph (d)(4)(E). This exemption shall not apply to material processed for purposes other than biomass fuel.

(5) The operator of a landfill or biomass power generation facility shall be exempt from the requirements of paragraph (d)(4), provided that the operator does not perform chipping and grinding of greenwaste on-site.

(Adopted January 10, 2003)

RULE 1133.2 EMISSION REDUCTIONS FROM CO-COMPOSTING OPERATIONS

(a) Purpose

The purpose of this rule is to reduce volatile organic compounds (VOC) and ammonia (NH_3) emissions from co-composting operations.

(b) Applicability

This rule applies to all new and existing co-composting operations.

(c) Definitions

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

(1) AERATION SYSTEM is a system where air is forced through organic materials being composted, through the use of fans or blowers.

(2) AGRICULTURAL COMPOSTING is composting conducted in agricultural settings where the feedstock consists of wastes generated on-site by the production and processing of farm or agricultural products.

(3) ACTIVE CO-COMPOSTING is the phase of the composting process that begins when organic materials are mixed together for composting and lasts a minimum of 22 days.

(4) BASELINE EMISSIONS FACTORS are the non-controlled emission factors for co-composting operations for VOC and ammonia.

(5) BIOFILTRATION is a pollution control technology that removes and oxidizes VOC and ammonia through the action of bacteria and other microorganisms.

(6) CO-COMPOSTING is composting where biosolids and/or manure are mixed with bulking agents to produce compost. Co-composting includes both the active and curing phases of the composting process.

(7) COMPOST is a product resulting from the controlled biological decomposition of organic materials.

(8) COMPOSTING is a process in which solid organic waste materials are decomposed in the presence of oxygen under controlled conditions through the action of bacteria and other microorganisms.

(9) CURING is the phase of the co-composting process that begins immediately after the end of the active phase of composting and lasts 40 days or until the compost has a Solvita Maturity Index of 7 or the product respiration rate is below 10 milligrams of oxygen consumed per gram of volatile solids per day as measured by direct respirometry.

(10) ENCLOSURE is a completely walled, floored, and roofed structure or vessel.

(11) EXISTING CO-COMPOSTING OPERATIONS are all co-composting operations that have begun operations on or before the date of adoption of this rule.

(12) GREENWASTE is any organic waste material generated from gardening, agriculture, or landscaping activities including, but not limited to, grass clippings, leaves, tree and shrub trimmings, and plant remains.

(13) GREENWASTE COMPOSTING is composting of greenwaste by itself or greenwaste in combination with up to 20 percent manure, by volume.

(14) NEW CO-COMPOSTING OPERATIONS are co-composting operations that have not started operations as of the date of adoption of this rule.

(15) OPERATOR is the operator of a co-composting operation.

(16) SOLVITA MATURITY INDEX is an index that defines the stage where compost exhibits resistance to further decomposition, as tested by the Solvita Maturity Test®.

(17) START-UP is the first day of active co-composting operations at the facility.

(18) THROUGHPUT is the mass of biosolids, manure, and greenwaste in tons per year as received by the facility and processed through composting excluding recycled materials.

(19) WOODWASTE is lumber, and the woody material portion of mixed demolition wastes and mixed construction wastes.

(20) WOODWASTE COMPOSTING is composting of woodwaste by itself.

(d) Requirements

(1) Operators of new co-composting operations shall:

(A) Conduct all active co-composting within the confines of an enclosure which meets the following conditions:

(i) The inward face velocity of air through each opening in which air can enter the enclosure shall be a minimum of 100

feet per minute, unless the opening is equipped with a closure device that seals the opening in the event that the airflow direction changes.

(ii) The area of all openings in the enclosure through which air can enter the enclosure shall not exceed 2% of the surface area of the enclosure's four walls, floor, and ceiling.

(iii) The enclosure may be opened for brief time periods, not to exceed a total of 30 minutes per day for purposes of access or maintenance. These time periods do not need to be included in the face velocity determination or as an opening for the two percent criteria.

(iv) No measurable increase over background levels of ammonia or hydrocarbons outside the enclosure shall occur at any enclosure opening including any opening that occurs briefly for access or maintenance. A portable ammonia or hydrocarbon analyzer shall be used for these measurements. The portable ammonia analyzer shall be operated per manufacturer's instructions and calibrated with certified zero and 10 parts per million ammonia standards. The portable hydrocarbon analyzer shall be a flame ionization detector operated per manufacturer's instructions and calibrated with certified zero and 10 parts per million methane standards.

(B) Conduct all curing using an aeration system that operates under negative pressure for no less than 90 percent of its blower(s) operating cycle; and,

(C) Vent the exhaust from the enclosure and the aeration system to an emissions control system designed and operated with a control efficiency equal to or greater than 80 percent, by weight, for VOC emissions and 80 percent, by weight, for ammonia emissions.

(2) In lieu of complying with the requirements of paragraph (d)(1), operators of new co-composting operations may submit a compliance plan, for the approval of the Executive Officer, that demonstrates an overall emission reduction of 80 percent, by weight, for VOC emissions and 80 percent, by weight, for ammonia emissions from the baseline emission factors.

(3) Operators of existing co-composting operations shall submit a compliance plan, for the approval of the Executive Officer, that demonstrates an overall emission reduction of 70 percent, by weight, for VOC emissions and 70 percent, by weight, for ammonia emissions from the baseline emission factors.

(4) The baseline emission factors to be used under paragraphs (d)(2) and (d)(3) shall be 1.78 pounds of VOC per ton of throughput and 2.93 pounds of ammonia per ton of throughput. The Executive Officer may approve the use of operation-specific baseline emission factors in lieu of the baseline emission factors, if the operator requests the use of such baseline emission factors as part of the compliance plan submittal and demonstrates that the operation specific baseline emissions factors are representative of noncontrolled operations.

(5) The operator of a co-composting operation shall submit the compliance plan required pursuant to paragraphs (d)(2) or (d)(3) at least one year prior to the start of operations for new co-composting operations and at least one year prior to the effective date of compliance for existing co-composting operations.

(6) The control efficiency required under subparagraphs (d)(1)(C) and (j)(2)(A) for new co-composting operations shall be demonstrated by a source test conducted as part of the permit application process and every two years thereafter.

(7) The control efficiency required under subparagraph (j)(2)(A) for existing co-composting operations shall be demonstrated by a source test conducted on or before January 1, 2007, and every two years thereafter.

(8) Within 180 days after the effective date of compliance and every two years thereafter, the operator of a co-composting operation shall perform all necessary tests and provide a certification of compliance report that includes all source test data and all other applicable information to demonstrate compliance with the emission reduction requirement of paragraphs (d)(2) or (d)(3).

(e) Compliance Plan

(1) Compliance plans required under paragraphs (d)(2) and (d)(3) shall contain all the following elements:

(A) The name(s), address(es), and telephone number(s) of the person(s) responsible for the preparation, submittal and implementation of the compliance plan;

(B) The name, address, and telephone number(s) of the facility for which the compliance plan is being prepared;

(C) A description and process diagram of the co-composting operation;

(D) A complete description of the control method(s) that will be used at the co-composting operation to meet the requirements under paragraphs (d)(2) or (d)(3). The description shall be in sufficient detail to demonstrate compliance with paragraphs (d)(2) or (d)(3). The acceptable control methods include, but are not limited to:

(i) enclosure design or technology;

(ii) aeration system design and operation;

(iii) biofiltration;

(iv) scrubber;

(v) feedstock component optimization;

(vi) biosolids thermal pre-treatment;

(vii) enclosed material mixing and thermal stripping;

(viii) staged active pile construction and aeration;

(ix) feedstock ratio optimization;

(x) process controls;

(xi) best management practices; or,

(xii) any combination of the methods listed above; or,

(xiii) any other method approved by the Executive Officer, California Air Resources Board, and the United States Environmental Protection Agency.

(E) All data, calculations methodology, calculations, records, manufacturer specifications and all other information necessary to determine that the composting methods and control methods proposed in subparagraph (e)(1)(D) will achieve the required emission reductions.

(F) A methodology and calculations establishing the daily and annual VOC and ammonia emissions or projected emissions;

(G) If applicable, a source test protocol developed in accordance with the requirements of subdivision (g), to establish operation-specific baseline emission factors.

(H) A source testing protocol developed in accordance with the requirements of subdivision (g) to demonstrate compliance with the overall emission reductions specified in paragraph (d)(2) or (d)(3).

(I) An identification of all equipment needing permits to construct and operate.

(2) In evaluating the plan, the Executive Officer may require tests and sampling as necessary to determine the adequacy of the plan and the likelihood of compliance with the emission reduction requirements of paragraphs (d)(2) or (d)(3).

(3) The Executive Officer may approve operation-specific baseline emissions factors provided the baseline emissions factors are substantiated with source test data obtained in accordance with subdivision (g) of this rule and the composting method(s) and mixture is representative of normal operations.

(4) The Executive Officer shall provide interim approval of the compliance plan provided the operator submits all of the information required under paragraph (e)(1) and the Executive Officer verifies that, by design, the plan will meet the requirements of paragraph (d)(2) or (d)(3), as applicable.

(5) Following the interim approval of the plan, the Executive Officer shall approve the compliance plan provided the operator submits, no later than 180 days after the effective date of compliance, a certification of compliance report that includes all source test data, and the Executive Officer verifies that the emissions from the co-composting operations comply with the requirements of paragraphs (d)(2) or (d)(3), as applicable.

(6) The Executive Officer may impose conditions necessary to ensure that the co-composting operation complies with the compliance plan and all applicable AQMD rules.

(7) The Executive Officer may require the operator to maintain records consistent with the compliance plan necessary to demonstrate compliance with the plan.

(8) Compliance with the provisions of the approved plan does not exempt an operator from complying with the requirements of the California Health and Safety Code, or any other AQMD rule.

(f) Compliance Schedule

(1) The effective dates of compliance for paragraphs (d)(1), (d)(2), and (d)(3) of this rule shall be as follows:

(A) Upon start-up for new co-composting operations.

(B) January 1, 2007 for existing co-composting operations with a facility design capacity of 100,000 tons of throughput per year or more.

(C) January 1, 2008 for existing co-composting operations with a facility design capacity greater than or equal to 10,000 but less than 100,000 tons of throughput per year.

(D) January 1, 2009 for existing co-composting operations with a facility design capacity less than 10,000 tons of throughput per year.

(2) The Executive Officer shall extend for up to three years the compliance date for an existing co-composting operation which, at the time of rule adoption and at least one year prior to the effective compliance date, has less than 3 years remaining under a non-renewable conditional use permit beyond its effective compliance date. By June 1, 2003, the operator of such an operation must submit to the Executive Officer a copy of the conditional use permit and a letter from the responsible agency verifying that the permit is non-renewable and the date when the permit is expired.

(g) Testing Protocol

(1) The operator of a co-composting operation shall conduct all required source and laboratory tests in accordance with an Executive Officer approved test protocol developed in accordance to the guidelines provided in Attachment A of this rule.

(2) The operator of the co-composting operation shall use a District approved laboratory in accordance with the Attachment A of this rule.

(3) The following methods shall be used to determine compliance with this rule:

(A) SCAQMD Method 207.1 – Determination of Ammonia Emissions from Stationary Sources.

(B) SCAQMD Method 25.3 – Determination of Low Concentration Non-Methane Non-Ethane Organic Compound Emissions from Clean Fueled Combustion Sources.

(C) SCAQMD Method 1.1 Sample and Velocity Traverses for Stationary Sources.

(D) SCAQMD Method 1.2 Sample and Velocity Traverses for Stationary Sources with Small Stacks or Ducts.

(E) SCAQMD Method 2.1 Determination of Stack Gas Velocity and Volumetric Flow Rate (S-Type Pitot Tube).

(F) SCAQMD Method 2.2 Direct Measurement of Gas Volume through Pipes and Small Ducts.

(G) SCAQMD Method 2.3 Determination of Gas Velocity and Volumetric Flow Rate From Small Stacks or Ducts.

(H) SCAQMD Method 4.1 Determination of Moisture Content in Stack Gases.

(h) Recordkeeping

The operator shall, at a minimum, maintain operation's records for a period of at least two years, or five years for facilities subject to Title V Permit Requirements, and make them available to the Executive Officer upon request.

(i) Plan Fees

Operators subject to a compliance plan submittal pursuant to paragraphs (d)(2) and (d)(3) shall be assessed, as applicable, filing and evaluation fees pursuant to Rule 306.

(j) Exemptions

(1) The provisions of subdivisions (d) through (i) of this rule shall not apply to agricultural composting operations, greenwaste composting operations, woodwaste composting operations, co-composting operations with a design capacity of less than 1,000 tons of throughput per year, and existing co-composting operations with a design capacity of less than 35,000 tons of throughput per year containing no more than 20 percent biosolids, by volume.

(2) Except for paragraphs (d)(6) and (d)(7), the provisions of subdivisions (d) through (i) shall not apply to new and existing co-composting operations that:

(A) Conduct co-composting operations using an aeration system that is vented to an emission control device with a control efficiency of

80 percent, by weight, for VOC emissions and 80 percent, by weight, for ammonia emissions; and,

(B) Are owned and operated by a municipality which composts waste generated within the jurisdiction of the municipality; and,

(C) Process less than 5,000 tons of biosolids or manure per year, combined.

ATTACHMENT A

GUIDELINES FOR THE DEVELOPMENT OF SOURCE TEST PROTOCOLS FOR VOC AND AMMONIA EMISSIONS FROM CO-COMPOSTING OPERATIONS

Source test protocols are to consist of testing plans to measure VOC and ammonia emissions due to the composting process. When used for determining the control device efficiency requirement specified for new facilities, the measurements shall consist of lb/hr measurements at the inlet and exhaust of the control device as well as a verification of the enclosure and are subject to the applicable requirements that follow. When used for determining the overall emission reduction requirements as compared to the baseline emissions factors, emissions are to be reported as % reductions for the active co-composting and curing phases in terms of pounds of emissions per ton of throughput (total raw material as received) and are subject to the applicable requirements that follow. The following are general requirements for all testing as well as specific requirements for the rule sections for each facility-specific protocol which must be prepared by the source test contractor and approved by the SCAQMD prior to testing.

1. *Alternative Test Methods*

   The reference test methods for ammonia, VOC, and flow rate cited in this guideline shall be used to determine compliance with this rule. Alternative test methods may be used if they are determined to be equivalent and approved in writing by the Executive Officer, the California Air Resources Board, and the U.S. Environmental Protection Agency. For the source test protocols, as defined as the manner in which the reference test methods are employed to obtain a measurement of the emissions, alternatives to the procedures cited in this guidelines may be used if they are determined to be equivalent and approved in writing by the Executive Officer.

2. *LAP Requirements*

   The sampling, analysis, and reporting shall be conducted by a laboratory/source test firm that has been approved under the SCAQMD Laboratory Approval Program (LAP) for the cited SCAQMD reference test methods, where LAP approval is available. For SCAQMD reference test methods for which no LAP program is available, the LAP approval requirement shall become effective one year after the date that the LAP program becomes available for that SCAQMD reference test method.

3. *Operating Conditions*

The testing must be conducted under representative operating conditions with respect to seasonal conditions, compost composition, process throughput, processing of the materials, and pile geometries. The following operating parameters shall be recorded during testing and reported with the test results:

a) A thorough description of the composting process and process diagram of each processing area and including residence times in each of the composting process areas.
b) Process throughput as determined by facility's billing scales or other calibrated measuring device that represents the tons of the material as received that is present at the facility during the time of the testing. When using the District Baseline Emission Factors, the process throughput is to include all of the raw organic materials that are composted excluding material that is recycled from previous similar processing. Several throughputs may be necessary if applicable to the different processing areas or pile ages.
c) Compost composition (percent and type of materials i.e. biosolids, manure, greenwaste, etc…).
d) Age of all piles that were tested and all piles present at the facility during testing.
e) Detailed Dimensions of all piles so that a surface area for each pile type can be calculated.

4. *Ammonia Sampling*

SCAQMD Method 207.1 shall be used to obtain the ammonia samples from each source of emissions to be tested. When sampling from a flux chamber, a sample line of minimal length should be connected to a midget sampling train consisting of; two midget impingers each filled with 15 ml of 0.1N Sulfuric Acid, an empty bubbler, and a bubbler filled with tared silica gel. The samples shall be analyzed for ammonium content as ammonia by ion chromatography or ion selective electrode.

5. *VOC Sampling*

Duplicate integrated gas samples shall be taken from each source of emissions to be tested using SCAQMD Method 25.3. The Method 25.3 apparatus should be connected to sample directly inside the flux chamber or duct as applicable. Compost emissions are considered as water soluble sources where the 50 ppm applicability limit of Method 25.3 does not apply.

6. *Specific Requirements for Testing Co-Composting Operations Control Equipment Performance*

For surface types of emissions, such as with open faced biofilter exhausts, the exhaust emission rate shall be determined as in the following Section (8).

For a control device inlet or exhaust that is vented through a testable duct, the gas velocity within the duct shall be measured according to SCAQMD Methods 1.1, 2.1, and 3.1. The flow rate shall also be corrected to dry standard conditions using the moisture content as determined by SCAQMD Method 4.1. This flow rate may then be used to determine mass emission rates.

The overall destruction efficiency is calculated as follows:

$$ODE = 100 \times (1 - (E / I)) \qquad \text{(Equation 1)}$$

Where:

ODE =	Overall Destruction Efficiency (%)
E =	Total Exhaust Emission Rate (lb/hr)
I =	Total Inlet Emission Rate to Control Device (lb/hr)

7. *Specific Requirements for Existing Co-Composting Operations and New Co-Composting Operations (Overall Emissions Reduction)*

A proposed measurement from the active and curing co-composting process, including but not limited to surface emissions of all piles where the materials are composted, and outlets (vents or surfaces) of control devices must be included in the protocol. If the emissions are vented to atmosphere from a vent stack such as from an otherwise uncontrolled aerated static pile or other vent to atmosphere, then the stack concentration, determined using methods specified in Sections (4) and (5) and flow rate measurements as specified in the previous Section (6) are required. From all surface types of emissions such as from compost piles and biofilter surfaces, the procedure for measuring surface emissions as in Section (8) is required. A measurement for fugitive emissions from aerated static pile surfaces must also be included.

Each type of pile must be tested. If the facility includes several identical piles, then only the largest pile need be tested. If the facility has more than three different age piles that are otherwise identical in processing and composition, then at a minimum three ages can be tested including newer, older, and middle aged piles. In any case, the surface area of all piles at the facility must be included in the determination of pile dimensions as recorded in Section (3).

If the facility elects to use an alternative to the District's baseline emissions factors, then a separate test must be conducted to establish this baseline on the uncontrolled composting operation (e.g., windrow method) with the same compost mix. Following the source test to determine an alternative baseline, facilities would have the option to use the District's baseline emissions factors or the alternative baseline emissions factors.

Reduction of emissions shall be calculated as follows:

$$\% \text{ Reduction} = 100 \times (1 - TE/B) \qquad \text{(Equation 2)}$$

Where:

TE = Total Active and Curing Phase Emissions (lb/ton throughput)
B = District Baseline Emissions or Alternative Baseline Emissions if Tested (lb/ton throughput)

8. *Procedure for Measuring Surface Emissions*

The procedure for measuring surface emissions such as the compost pile and biofilter surfaces that cannot be tested by conventional methods through a stack or duct, is a modified form of the procedures found in the US Environmental Protection Agency's (EPA) *Measurement of Gaseous Emission Rates from Land Surfaces Using an Emission Isolation Flux Chamber User's Guide* (EPA Guide). The modification to the procedures in the EPA Guide are specified in the following requirements.

The flux chamber encompasses a fixed surface area of 1.4 ft^2 and contains a sweep air system to obtain a homogeneous air sample by employing a mixing fan and sweep gas (10% He in air at 5 liters/min recommended). The sweep gas must contain a non reactive and non-present tracer such as the aforementioned 10% helium so that a correction for the contribution of the surface flow rate can be calculated.

A minimum of ten (10) sample locations or a sufficient number at each pile/surface tested must be obtained in order to achieve a representative sample of the surface emissions. These locations can be composited for each pile/surface to reduce testing costs. For example, for one hour sampling, ten (10) random positions on the pile should be tested for 6 minutes each. Alternatively, a lesser number of sample locations may be sampled provided that an evaluation of spatial variation demonstrates that the number of sample locations are sufficient.

The emissions must be reported in units of lb/hr-ft^2, lb/hr and lb/ton of throughput. The following calculations shall apply to the test results:

$$\text{Surface Flow Correction Factor} = C_t / C_s \qquad \text{(Equation 3)}$$

Where:

C_t = Concentration of Tracer in Sweep Gas
C_s = Concentration of Sweep Gas in Flux Chamber Sample

Corrected Flux Chamber Results (lb/hr-ft^2) = UFC x SFCF (Equation 4)

Where:

UFC = Uncorrected Flux Chamber Results (lb/hr-ft^2)
SFCF = Surface Flow Correction Factor

lb/hr = lb/hr-ft^2 x Total Compost Surface Area in Category (Equation 5)

lb/ton throughput = lb/hr x (24 hr/day) /PT (Equation 6)

Where:

PT = Process Throughput (total ton/day as received)

Total Emissions (lb/ton throughput) = $\sum$ P (Equation 7)

Where:

P = Active and curing sources of the Facility Compost Emissions (lb/ton throughput)

For a facility where not every age of pile was tested, the surface areas from each pile in the facility must be included and sorted into appropriate age and emissions categories from those that were measured.

(Adopted July 8, 2011)

RULE 1133.3 EMISSION REDUCTIONS FROM GREENWASTE COMPOSTING OPERATIONS

(a) Purpose

The purpose of this rule is to reduce fugitive emissions of volatile organic compounds (VOC) and ammonia occurring during greenwaste composting operations.

(b) Applicability

This rule applies to the operator of all new and existing greenwaste composting operations that produce active or finished compost from greenwaste by itself or greenwaste in combination with manure or foodwaste, unless otherwise exempted under subdivision (g) of this rule.

(c) Definitions

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

(1) ACTIVE COMPOST means material that is in the process of being rapidly decomposed and is biologically unstable. Active compost is generating temperatures of at least 122 degrees Fahrenheit during decomposition. Active compost includes, but is not limited to, pathogen-reduced mulch.

(2) ACTIVE PHASE means the phase of the greenwaste composting process that begins when organic waste materials are mixed together for composting and lasts a minimum of 22 days under controlled conditions or until the compost has a Solvita Maturity Index of five or greater measured pursuant to subparagraph (e)(4)(A).

(3) BACKYARD COMPOSTING means composting conducted by a household including, but not limited to, single family residences, condominiums, duplexes, or apartment buildings.

(4) BASELINE EMISSION FACTORS mean the uncontrolled emission factors for greenwaste composting operations for VOC and ammonia.

(5) COMMUNITY COMPOSTING means composting conducted by a residential neighborhood association using feedstock generated within the residential neighborhood to produce compost for the neighborhood's use.

(6) COMPOSTING means a process in which solid organic waste materials are decomposed in the presence of oxygen through the action of bacteria and other microorganisms.

(7) COMPOST OVERS mean the oversized woody materials that do not decompose in a typical composting cycle and are screened out of finished product at the end of composting. Compost overs have been through the pathogen reduction process outlined in Title 14, Section 17868.3 of the California Code of Regulations.

(8) CURING PHASE means the phase of the greenwaste composting process that begins immediately after the end of the active phase of composting and lasts a minimum of 40 days or until the compost has a Solvita Maturity Index of seven or the product respiration rate is below ten milligrams of oxygen consumed per gram of volatile solids per day as measured by direct respirometry, pursuant to subparagraph (e)(4)(B).

(9) EXISTING GREENWASTE COMPOSTING OPERATIONS mean all greenwaste composting operations that have begun operations on or before July 8, 2011.

(10) FINISHED COMPOST means a humus-like material and/or compost overs that result from the controlled biological decomposition of organic waste materials and is biologically stable. Both the active and curing phases of the greenwaste composting are required to achieve this product.

(11) FOODWASTE means any pre- or post-consumer food scraps collected from the food service industry, grocery stores, or residential food scrap collection. Foodwaste also includes food scraps that are chipped and ground.

(12) GREENWASTE means any organic waste material generated from gardening, agriculture, or landscaping activities including, but not limited to, grass clippings, leaves, tree and shrub trimmings, and plant remains.

(13) GREENWASTE COMPOSTING means composting of greenwaste by itself or a mixture with foodwaste, or with up to 20 percent manure, per pile volume basis.

(14) NEW GREENWASTE COMPOSTING OPERATIONS mean greenwaste composting operations that have not started operations as of July 8, 2011.

(15) NURSERY COMPOSTING means composting conducted at a nursery to produce compost for on-site use.

(16) ORGANIC WASTE means any organic waste material that includes foodwaste, greenwaste, woodwaste, or manure, or a mixture thereof.

(17) OPERATOR means any person that operates a greenwaste composting operation.

(18) PILE means compostable material that is heaped together.

(19) RECREATIONAL FACILITY COMPOSTING means composting conducted at parks, arboretums and other recreational facilities using feedstock generated on-site to produce compost for on-site use.

(20) SOLVITA MATURITY INDEX means an index that defines the stage where compost exhibits resistance to further decomposition, as tested by the Solvita Maturity Test®.

(21) START-UP means the first day of active greenwaste composting operations at the facility.

(22) THROUGHPUT means the mass of manure, foodwaste, or greenwaste in tons per year as received by the facility and processed through composting, excluding recycled materials.

(23) TMECC means Test Methods for the Examination of Composting and Compost published by the US Composting Council Research and Education Foundation.

(24) WOODWASTE means lumber, and the woody material portion of mixed demolition and construction wastes. Woodwaste also includes large wood materials of curbside greenwaste or mixed greenwaste that is screened or unscreened, such as tree trimmings, branches, tree trunks, stumps, and limbs exceeding two inches in any dimension.

(d) Requirements

(1) Effective July 8, 2011, the operator of greenwaste composting operations shall comply with the following requirements:

(A) Chip or grind, as necessary, and use greenwaste for on-site composting as allowed by the Local Enforcement Agency.

(B) Use foodwaste for on-site composting within 48 hours of receipt or cover foodwaste with screened or unscreened finished compost until used, unless otherwise required by the Local Enforcement Agency.

(2) Effective upon start-up for new greenwaste composting operations and effective November 8, 2011 for existing greenwaste composting

operations, the operator of greenwaste composting operations processing greenwaste only or up to 20 percent manure, by volume, or up to 5,000 tons per year of foodwaste throughput shall comply with the following requirements:

(A) Cover each active phase pile with screened or unscreened finished compost within twenty-four hours of initial pile formation such that the top is at least six inches thick and the pile shall not be turned for the first seven days of the active phase of composting, unless subparagraph (d)(2)(D) applies.

(B) For the first fifteen days after initial pile formation for the active phase period of composting, within six hours before turning, apply water as necessary to the surface area of each active phase pile such that the top one half of the pile is wet at a depth of at least three inches. Alternatively, the operator may apply water during turning using a windrow turner which is equipped with water spraying technology during the entire windrow turning process.

(i) For the purpose of this subparagraph, "wet" shall be determined by means of a squeeze ball test or an alternative approved by the Executive Officer, California Air Resources Board, and the United States Environmental Protection Agency. The ball test shall be conducted by taking a sample of the compostable material from the top half of the pile, at least three inches below the outer surface. The material should be squeezed into a ball using hand pressure and wearing a protective glove. There should be at least enough water to form a ball when compressed, but the ball may break when tapped. If the ball crumbles upon release of the hand pressure, apply additional water to the windrow prior to turning until the material passes the ball test.

(C) If a rain event occurs prior to watering the pile within six hours before turning and the pile is wet to a depth of three inches, the operator may turn the pile without adding additional water. If the top half of the pile is dry to the three inch depth, apply additional water to the pile pursuant to subparagraph (d)(2)(B).

(D) If the pile needs to be turned within the first seven days for managing temperature or pathogen reduction pursuant to Title 14 Division 7, Chapter 3.1, Section 17868.3 of the California Code of Regulations, the operator does not need to re-apply the screened or unscreened finished compost cover and shall apply water pursuant to subparagraph (d)(2)(B) for the first fifteen days of the active phase.

(E) The operator may implement an alternate mitigation measure that will be based on a test protocol approved by the Executive Officer, California Air Resources Board, and the United States Environmental Protection Agency and that demonstrates emission reductions by at least 40 percent, by weight, for VOC and emission reductions by at least 20 percent, by weight, for ammonia for combined screened or unscreened finished compost cover and water application.

(3) Effective July 8, 2011, the operator of greenwaste composting operations processing greater than 5,000 tons per year of foodwaste throughput shall comply with the following requirements, for the purpose of regulatory compliance:

(A) Any active phase of composting containing more than 10 percent foodwaste, by weight, shall be conducted using an emission control device designed and operated with an overall system control efficiency of at least 80 percent, by weight, each for VOC and ammonia emissions.

(B) The operator may implement a control alternative if the alternative is approved by the Executive Officer, California Air Resources Board, and the United States Environmental Protection Agency, to achieve VOC and ammonia reductions that are greater than or equal to the reductions required pursuant to subparagraph (d)(3)(A).

(C) For new greenwaste composting operations that intend to compost greater than 5,000 tons per year of foodwaste throughput, a permit shall be obtained for an emission control device, as specified in subparagraph (d)(3)(A) or (d)(3)(B), prior to construction.

The annual throughput calculation may exclude any non-putrescible materials, including, but not limited to paper, woody, other low-water,

high cellulose materials, and non-compostable contaminants and green waste that are separated either before or after composting and shipped off-site for disposal provided they are quantified and appropriate records are maintained for.

(4) No later than October 10, 2011, for existing greenwaste composting operations that, as of July 8, 2011, process or plan to process greater than 5,000 tons per year of foodwaste throughput, the operator shall file a permit application for an emission control device and fully implement the emission control device in accordance with subparagraphs (d)(3)(A) or (d)(3)(B) within six months upon approval of the permit application.

(5) The overall control efficiency required in subparagraph (d)(3)(A) shall be demonstrated by a source test within three months after implementation of the emission control device, or within nine months of permit approval, whichever occurs sooner, and every three years thereafter. For the purpose of this rule, the baseline emission factors to be used shall be 4.25 pounds of VOC per ton of throughput and 0.46 pounds of ammonia per ton of throughput for the active phase of composting only. The Executive Officer may approve the use of alternate baseline emission factors, if the operator demonstrates through the approved source test that alternate baseline emission factors are representative of uncontrolled operations for that facility

(6) All emission control devices shall be installed, operated, and maintained in accordance with the manufacturer's operation and maintenance manual or other similar written materials supplied by the manufacturer or distributor of such equipment to ensure that the system remains in proper operating conditions. Such documentation shall be made available to the Executive Officer upon request.

(7) All records, including application of screened or unscreened finished compost and water, operation and maintenance of an emission control device, and source tests, shall be kept and maintained at the facility pursuant to subdivision (f).

(e) Test Methods and Protocol

(1) For a greenwaste composting operation subject to paragraphs (d)(3) through (d)(5), the operator shall conduct all required source and laboratory tests in accordance with an Executive Officer approved test

protocol developed in accordance with the guidelines provided in Attachment A of this rule.

(2) For a greenwaste composting operation subject to paragraphs (d)(3) through (d)(5), the operator shall use a District approved laboratory in accordance with the Attachment A of this rule.

(3) The following methods shall be used to determine compliance with this rule:

(A) SCAQMD Method 207.1 – Determination of Ammonia Emissions from Stationary Sources.

(B) SCAQMD Method 25.3 – Determination of Low Concentration Non-Methane Non-Ethane Organic Compound Emissions from Clean Fueled Combustion Sources.

(C) SCAQMD Method 1.1 – Sample and Velocity Traverses for Stationary Sources.

(D) SCAQMD Method 1.2 – Sample and Velocity Traverses for Stationary Sources with Small Stacks and Ducts.

(E) SCAQMD Method 2.1 – Determination of Stack Gas Velocity and Volumetric Flow Rate (S-Type Pitot Tube).

(F) SCAQMD Method 2.2 – Direct Measurement of Gas Volume through Pipes and Small Ducts.

(G) SCAQMD Method 2.3 – Determination of Gas Velocity and Volumetric Flow Rate from Small Stacks or Ducts.

(H) SCAQMD Method 4.1 – Determination of Moisture Content in Stack Gases.

(4) Triplicate samples shall be taken for the following test methods:

(A) TMECC 05.08-E – Solvita Maturity Index (April 7, 2002).

(B) TMECC 05.08-A – Specific Oxygen Uptake Rate (April 7, 2002).

(f) Recordkeeping

Records shall be kept in a format approved by the Executive Officer. All operational records and information recorded pursuant to the provisions of this rule shall be maintained for the prior five years of operation, with the most recent two years retained at the facility, which shall be immediately available upon request by the Executive Officer. The remaining three years of records shall be made available to the Executive Officer within one week of request.

(g) Exemptions

(1) Composting facilities subject to Rule 1133.2 – Emission Reductions from Co-Composting Operations, are exempt from the provisions of this rule.

(2) If the operator of any greenwaste composting operation installs an emission control device, in accordance with paragraphs (d)(3) through (d)(6), the provisions of paragraph (d)(2) do not apply.

(3) The following types of facilities and operations are exempt from the requirements of this rule, provided that the operation is not subject to the Local Enforcement Agency Notification or Permit regulations pursuant to Title 14 Division 7, Chapter 3.1, Section 17857.1 of the California Code of Regulations:

(A) Community composting;

(B) Nursery composting;

(C) Backyard composting; and

(D) Recreational facility composting.

ATTACHMENT A

GUIDELINES FOR THE DEVELOPMENT OF SOURCE TEST PROTOCOLS FOR VOC AND AMMONIA EMISSIONS FROM GREENWASTE COMPOSTING OPERATIONS

Source test protocols are to consist of testing plans to measure VOC and ammonia emissions due to the composting process. When used for determining the control device efficiency requirement specified for new and existing facilities, the measurements shall consist of lb/hr measurements at the inlet and exhaust of the control device and are subject to the applicable requirements that follow. When used for determining the overall emission reduction requirements as compared to the baseline emissions factors, emissions are to be reported as % reductions for the active phase composting in terms of pounds of emissions per ton of throughput (total raw material as received) and are subject to the applicable requirements that follow. The following are general requirements for all testing as well as specific requirements for the rule sections for each facility-specific protocol which must be prepared by the source test contractor and approved by the SCAQMD prior to testing.

1. *Alternative Test Methods*

   The reference test methods for ammonia, VOC, and flow rate cited in this guideline shall be used to determine compliance with this rule. Alternative test methods may be used if they are determined to be equivalent and approved in writing by the Executive Officer, the California Air Resources Board, and the U.S. Environmental Protection Agency. For the source test protocols, as defined as the manner in which the reference test methods are employed to obtain a measurement of the emissions, alternatives to the procedures cited in this guidelines may be used if they are determined to be equivalent and approved in writing by the Executive Officer.

2. *LAP Requirements*

   The sampling, analysis, and reporting shall be conducted by a laboratory/source test firm that has been approved under the SCAQMD Laboratory Approval Program (LAP) for the cited SCAQMD reference test methods, where LAP approval is available. For SCAQMD reference test methods for which no LAP program is available, the LAP approval requirement shall become effective one year after the date that the LAP program becomes available for that SCAQMD reference test method.

3. *Operating Conditions*

   The testing must be conducted under representative operating conditions with respect to seasonal conditions, compost composition, process throughput,

processing of the materials, and pile geometries. The following operating parameters shall be recorded during testing and reported with the test results:

a) A thorough description of the composting process and process diagram of each processing area and including residence times in each of the composting process areas.
b) Process throughput as determined by facility's billing scales or other calibrated measuring device that represents the tons of the material as received that is present at the facility during the time of the testing. When using the District Baseline Emission Factors, the process throughput is to include all of the raw organic materials that are composted excluding material that is recycled from previous similar processing. Several throughputs may be necessary if applicable to the different processing areas or pile ages.
c) Compost composition (percent and type of materials i.e. manure, greenwaste, foodwaste, etc…).
d) Age of all piles that were tested and all piles present at the facility during testing.
e) Detailed dimensions of all piles or the biofilter so that a surface area for each pile type can be calculated.
f) A description of the biofilter system, including a process diagram and type of biofilter media.
g) Age of the biofilter media.
h) A thorough description of the humidification and moisture maintenance system for the biofilter.
i) Identification of peripheral monitoring equipment, such as moisture or temperature sensors, and data from them during testing.

4. *Ammonia Sampling*

SCAQMD Method 207.1 shall be used to obtain the ammonia samples from each source of emissions to be tested. When sampling from a flux chamber, a sample line of minimal length should be connected to a midget sampling train consisting of; two midget impingers each filled with 15 ml of 0.1N Sulfuric Acid, an empty bubbler, and a bubbler filled with tared silica gel. The samples shall be analyzed for ammonium content as ammonia by ion chromatography or ion selective electrode.

5. *VOC Sampling*

Duplicate integrated gas samples shall be taken from each source of emissions to be tested using SCAQMD Method 25.3. The Method 25.3 apparatus should be connected to sample directly inside the flux chamber or duct as applicable. Compost emissions are considered as water soluble sources where the 50 ppm applicability limit of Method 25.3 does not apply.

6. *Specific Requirements for Testing Greenwaste Composting Operations Control Equipment Performance*

   For surface types of emissions, such as with open faced biofilter exhausts, the exhaust emission rate shall be determined as in the following Section (8).

   For a control device inlet or exhaust that is vented through a testable duct, the gas velocity within the duct shall be measured according to SCAQMD Methods 1.1, 2.1, and 3.1. The flow rate shall also be corrected to dry standard conditions using the moisture content as determined by SCAQMD Method 4.1. This flow rate may then be used to determine mass emission rates.

   The overall destruction efficiency is calculated as follows:

   $$ODE = 100 \times (1 - (E / I)) \qquad \text{(Equation 1)}$$

   Where:

   ODE = Overall Destruction Efficiency (%)
   E = Total Exhaust Emission Rate (lb/hr)
   I = Total Inlet Emission Rate to Control Device (lb/hr)

7. *Specific Requirements for Existing Greenwaste Composting Operations and New Greenwaste Composting Operations (Overall Emissions Reduction)*

   A proposed measurement from the active greenwaste composting process, including but not limited to surface emissions of all piles where the materials are composted, and outlets (vents or surfaces) of control devices must be included in the protocol. If the emissions are vented to atmosphere from a vent stack such as from an otherwise uncontrolled aerated static pile or other vent to atmosphere, then the stack concentration, determined using methods specified in Sections (4) and (5) and flow rate measurements as specified in the previous Section (6) are required. From all surface types of emissions such as from compost piles and biofilter surfaces, the procedure for measuring surface emissions as in Section (8) is required. A measurement for fugitive emissions from aerated static pile surfaces must also be included.

   Each type of pile must be tested. If the facility includes several identical piles, then only the largest pile need be tested. If the facility has more than three different age piles that are otherwise identical in processing and composition, then at a minimum three ages can be tested including newer, older, and middle aged piles. In any case, the surface area of all piles at the facility must be included in the determination of pile dimensions as recorded in Section (3).

   If the facility elects to use an alternative to the District's baseline emissions factors, then a separate test must be conducted to establish this baseline on the

uncontrolled composting operation (e.g., windrow method) with the same compost mix. Following the source test to determine an alternative baseline, facilities would have the option to use the District's baseline emissions factors or the alternative baseline emissions factors.

Reduction of emissions shall be calculated as follows:

% Reduction = 100 x (1-TE/B) (Equation 2)

Where:

TE = Total Active and Curing Phase Emissions (lb/ton throughput)
B = District Baseline Emissions or Alternative Baseline Emissions if Tested (lb/ton throughput)

8. *Procedure for Measuring Surface Emissions*

The procedure for measuring surface emissions such as the compost pile and biofilter surfaces that cannot be tested by conventional methods through a stack or duct, is a modified form of the procedures found in the US Environmental Protection Agency's (EPA) *Measurement of Gaseous Emission Rates from Land Surfaces Using an Emission Isolation Flux Chamber User's Guide* (EPA Guide). The modification to the procedures in the EPA Guide is specified in the following requirements.

The flux chamber encompasses a fixed surface area of 1.4 ft^2 and contains a sweep air system to obtain a homogeneous air sample by employing a mixing fan and sweep gas (10% He in air at 5 liters/min recommended). The sweep gas must contain a non reactive and non-present tracer such as the aforementioned 10% helium so that a correction for the contribution of the surface flow rate can be calculated.

A minimum of ten (10) sample locations or a sufficient number at each pile/surface tested must be obtained in order to achieve a representative sample of the surface emissions. These locations can be composited for each pile/surface to reduce testing costs. For example, for one hour sampling, ten (10) random positions on the pile should be tested for 6 minutes each. Alternatively, a lesser number of sample locations may be sampled provided that an evaluation of spatial variation demonstrates that the number of sample locations is sufficient.

The emissions must be reported in units of lb/hr-ft^2, lb/hr and lb/ton of throughput. The following calculations shall apply to the test results:

Surface Flow Correction Factor = C_t / C_s (Equation 3)

Where:

C_t = Concentration of Tracer in Sweep Gas
C_s = Concentration of Sweep Gas in Flux Chamber Sample

Corrected Flux Chamber Results (lb/hr-ft^2) = UFC x SFCF (Equation 4)

Where:

UFC = Uncorrected Flux Chamber Results (lb/hr-ft^2)
SFCF = Surface Flow Correction Factor

lb/hr = lb/hr-ft^2 x Total Compost Surface Area in Category (Equation 5)

lb/ton throughput = lb/hr x (24 hr/day) /PT (Equation 6)

Where:

PT = Process Throughput (total ton/day as received)

Total Emissions (lb/ton throughput) = $\sum$ P (Equation 7)

Where:

P = Active and curing sources of the Facility Compost Emissions (lb/ton throughput)

For a facility where not every age of pile was tested, the surface areas from each pile in the facility must be included and sorted into appropriate age and emissions categories from those that were measured.

(Adopted January 10, 2003)

RULE 1133. COMPOSTING AND RELATED OPERATIONS – GENERAL ADMINISTRATIVE REQUIREMENTS

(a) Purpose

This rule sets forth administrative requirements for existing and new chipping and grinding activities and composting operations. The purpose of this rule is to create an emissions-related informational database on composting and related operations through a registration process.

(b) Applicability

This rule applies to owners or operators of chipping and grinding activities and composting operations unless otherwise exempt under subdivision (g).

(c) Definitions

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

(1) AGRICULTURAL COMPOSTING is composting conducted in agricultural settings where the feedstock consists of wastes generated on-site by the production and processing of farm or agricultural products.

(2) BACKYARD COMPOSTING is composting conducted by a household including, but not limited to, single family residences, duplexes, or apartment buildings.

(3) CHIPPING AND GRINDING is any activity that mechanically reduces the size of greenwaste, woodwaste, and/or foodwaste.

(4) COMMUNITY COMPOSTING is composting conducted by a residential neighborhood association using feedstock generated within the residential neighborhood to produce compost for the neighborhood's use.

(5) COMPOST is a product resulting from the controlled biological decomposition of organic materials.

(6) COMPOSTING is a process in which solid organic waste materials are decomposed in the presence of oxygen under controlled conditions through the action of bacteria and other microorganisms.

(7) COMPOSTING OPERATIONS are facilities involved in composting organic materials including, but not limited to, greenwaste, biosolids, manure and foodwaste.

(8) FOODWASTE is any food scraps collected from the food service industry, grocery stores, or residential food scrap collection. Foodwaste also includes foodwaste that is chipped and ground. Foodwaste mixed with greenwaste is considered foodwaste.

(9) GREENWASTE is any organic waste material generated from gardening, agriculture, or landscaping activities including, but not limited to, grass clippings, leaves, tree and shrub trimmings, and plant remains.

(10) NURSERY COMPOSTING is composting conducted at a nursery to produce compost for on-site use.

(11) PORTABLE CHIPPING AND GRINDING is chipping and grinding utilizing equipment with a manufacturer's rating of 170 brake horsepower or less.

(12) RECREATIONAL FACILITIES COMPOSTING is composting conducted at parks, arboretums and other recreational facilities using feedstock generated on-site to produce compost for on-site use.

(13) WOODWASTE is lumber, and the woody material portion of mixed demolition wastes and mixed construction wastes.

(d) Requirements

Operators of chipping and grinding activities and composting operations shall meet the following requirements:

(1) No later than July 1, 2003, operators of existing chipping and grinding activities and composting operations shall register with the District by submitting the complete and applicable information required in accordance with subdivision (e) of this rule.

(2) Prior to start of operation, operators of new chipping and grinding activities and composting operations, shall register with the District by submitting the complete and applicable information required in accordance with subdivision (e) of this rule.

(3) No later than July 1, 2004, and every year thereafter, operators of chipping and grinding activities and composting operations registered with the District shall update their registration information by providing any changes to the information submitted in accordance with subdivision (e) of this rule.

(e) Registration Process

The registration and annual update required pursuant to subdivision (d) of this rule shall, at a minimum, include the following information:

(1) Facility name;

(2) Facility location address and mailing address;

(3) Facility legal owner(s), contact person, title, telephone number, and mailing address;

(4) Facility operator (s), contact person, title, telephone number, and mailing address;

(5) Number of employees at the facility;

(6) Applicable California Integrated Waste Management Board's permit number, identification number, and facility classification;

(7) Type and amount of materials received and type and amount of products produced for the preceding year;

(8) Facility design capacity (throughput) in tons per year;

(9) Facility actual throughput in tons per month for the preceding calendar year. For new facilities, projected throughput must be provided;

(10) Feedstock description;

(11) Facility process description including, process diagram and a description of chipping and grinding operations and composting methods used (if applicable);

(12) Published tipping fee schedule for the preceding calendar year by feedstock, and;

(13) Number of air quality- and odor-related enforcement actions issued in writing against the facility by any Local Enforcement Agency and the California Integrated Waste Management Board for the preceding calendar year.

(f) Fees

The operator of any activity or facility subject to registration and annual update requirements pursuant to this rule shall be subject to a one-time fee equivalent to the plan submittal fee in accordance with Rule 306 at the time of registration.

(g) Exemptions

The following types of facilities and operations are exempt from the requirements of this rule:

(1) Portable chipping and grinding;
(2) Community composting;
(3) Agricultural composting;
(4) Nursery composting;
(5) Recreational facilities composting;
(6) Backyard Composting; and
(7) Woodwaste chipping and grinding facilities.

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

(Adopted August 4, 1989) (Amended December 7, 1995) (Amended April 11, 1997) (Amended August 8, 1997)

RULE 1134. EMISSIONS OF OXIDES OF NITROGEN FROM STATIONARY GAS TURBINES

(a) Applicability

The provisions of this rule shall apply to all existing stationary gas turbines, 0.3 megawatt (MW) and larger, as of August 4, 1989.

(b) Definitions

1. CHEMICAL PROCESSING GAS TURBINE UNIT is a gas turbine unit that vents its exhaust gases into the operating stream of a chemical process.
2. COGENERATION CYCLE GAS TURBINE UNIT is a gas turbine unit that operates both for the simultaneous production of shaft work and for the recovery of useful thermal energy from the exhaust gases or waste steam as defined by Section 25134 of the California Public Resources Code.
3. COMBINED CYCLE GAS TURBINE UNIT is a gas turbine unit that operates both for the production of electrical energy from shaft work and the useful energy produced from heat recovered from its exhaust gases.
4. EMERGENCY STANDBY GAS TURBINE UNIT is a gas turbine unit that operates only as a mechanical or electrical power source for a facility when the primary power source has been rendered inoperable, except due to power interruption pursuant to an interruptible power supply agreement. This does not include utility company electrical power plant units.
5. EMISSION CONTROL PLAN is 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.
6. EXHAUST AFTER-TREATMENT means a control method for the post-combustion reduction of NOx emissions, such as selective catalytic reduction (SCR).
7. EXISTING GAS TURBINE UNIT is a stationary gas turbine unit that met the following criteria prior to August 4, 1989:

   (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(b)(1).

8. HHV - HIGHER HEATING VALUE OF FUEL.
9. LHV - LOWER HEATING VALUE OF FUEL.
10. PEAKING GAS TURBINE UNIT is a gas turbine unit that is used intermittently to produce energy on a demand basis.
11. PIPELINE GAS TURBINE UNIT is a stationary gas turbine unit used to transport gases or liquids in a pipeline.
12. POWER AUGMENTATION is the 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.
13. RATING OF A GAS TURBINE UNIT is the continuous MW (megawatt) rating or mechanical equivalent by a manufacturer for gas turbine unit(s) without power augmentation.
14. SEWAGE DIGESTER GAS is any gas derived from anaerobic decomposition of organic sewage.
15. SOUTHEAST DESERT AIR BASIN (SEDAB) means the 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.

16. STATIONARY GAS TURBINE UNIT is any gas turbine unit that is gas and/or liquid fueled with or without power augmentation. This gas turbine 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 12-month period. Two or more gas turbine~~s~~ units powering one shaft shall be treated as one gas turbine unit.
17. THERMAL STABILIZATION PERIOD is the two-hour start up time necessary for NOx control purposes in cogeneration cycle, combined cycle, or any other applicable stationary gas turbine units.

(c) Emissions Limitations

1. The operator of any stationary gas turbine unit shall not operate such unit under load conditions, excluding the thermal stabilization period or other time period specified in the Permit to Construct or the Permit to Operate issued prior to August 4, 1989, which result in the discharge of oxides of nitrogen (NOx) emissions, directly or indirectly, into the atmosphere at concentrations in excess of the following as measured pursuant to subdivision (e):

Where:

Compliance Limit	=	allowable NOx emissions (ppm by volume).
Reference Limit	=	the NOx emission limit (ppm by volume) is corrected to 15 percent oxygen on a dry basis, and averaged over 15 consecutive minutes. These limits for various megawatt ratings (continuous rating by the manufacturer without power augmentation) are as follows:

REFERENCE NOx LIMITS, PPM

Unit Size Megawatt (MW) Rating	Effective 12-31-95
0.3 to Less Than 2.9 MW	25
2.9 to Less Than 10.0 MW	9
2.9 to Less Than 10.0 MW No SCR	15
10.0 MW and Over	9
10.0 MW and Over No SCR	12
60 MW and Over Combined Cycle No SCR	15
60 MW and Over Combined Cycle	9
	Effective 4/11/97
2.9 to Less Than 10.0 MW Utilizing Fuel Containing a Minimum of 60% Sewage Digester Gas by Volume on a Daily Average	25

And,

$$EFF = \frac{3413 \times 100\%}{\text{Actual Heat Rate at HHV of Fuel (BTU/KW-HR)}}$$

or,

or

EFF = the demonstrated percent efficiency of the gas turbine unit only as calculated without consideration of any downstream energy recovery from the actual heat rate, (BTU/KW HR) or 1.34 BTU/HP; corrected to the HHV (higher heating value) of the fuel, as measured at peak load for that facility; or the manufacturer's continuous rated percent efficiency (manufacturer's rated efficiency) of the gas turbine unit after correction from LHV (lower heating value) to the HHV of the fuel, whichever efficiency is higher. The value of EFF shall not be less than 25 percent. Gas turbine units with lower efficiencies will be assigned a 25 percent efficiency for this calculation.

2. The operator of any existing gas turbine unit subject to this rule shall also be subject to Regulation XIII if carbon monoxide (CO) emissions increase as a result of the application of NOx controls.

(d) Monitoring and Source Testing

The operator of any stationary gas turbine unit subject to the provisions of this rule shall perform the following actions:

1. For cogeneration and combined cycle gas turbine units 2.9 MW and larger (continuous rating by the manufacturer without power augmentation), install, operate, and maintain in calibration a continuous in-stack NOx and oxygen monitoring system which meets the requirements of 40 CFR Part 60, Appendix B, Spec. 2, for NOx, Spec. 3 for oxygen (except the alternative RA procedures for Spec. 2 shall not apply), the 2 and 24 -hour calibration spec. of Rule 218, and 40 CFR Part 60, Appendix F to demonstrate compliance with the emission limits of this rule. The continuous emissions monitoring system shall have data gathering and retrieval capability which meets the reporting requirements of 40 CFR part 60.7(c), 60.7(d), and 60.13. This system shall include equipment that measures and records the following:

   (A) Flow rate of liquids or gases and the ratio of water or steam to fuel added to the combustion chamber or to the exhaust for the reduction of NOx emissions, as applicable.

   (B) Elapsed time of operation.

2. Source Testing

   (A) Provide source test information regarding the gas turbine unit’s exhaust gas NOx concentration, and the demonstrated percent efficiency (EFF), or the manufacturer’s rated EFF, if the Executive Officer determines that it is representative of the unit’s EFF, and the carbon monoxide concentration as specified pursuant to paragraph (e)(1). NOx and carbon monoxide concentrations shall be in ppm by volume, corrected to 15 percent oxygen on a dry basis.

   (B) Source Test Frequency

(i) Units emitting 25 tons or more of NOx per calendar year shall be source tested, at least once every 12 months.

(ii) All other existing units shall be source tested within 90 days after every 8,400 hours of operation.

(e) Test Methods

The following may be used by the Executive Officer to verify the concentrations of NOx, CO and oxygen subject to the provisions of this rule. Emissions determined to exceed any limits established by this rule through either of the following shall constitute a violation of this rule.

1. District Test Methods 3.1, 7.1, 10.1 and 100.1 and EPA Test Method 10 or any method deemed to be equivalent by the Executive Officer and approved by CARB and EPA.
2. Data obtained from a continuous emissions monitoring system, which is installed and properly operated according to paragraph (d)(1) of this rule and as approved by the Executive Officer.

(f) Recordkeeping

The facility operator shall comply with the following provisions:

1. All records shall be maintained at the facility for a period of two years and made available to District staff upon request.
2. Maintain a gas turbine operating log that includes, on a daily basis, the actual Pacific Standard Time start-up and stop time, total hours of operation; type and quantity of fuel used (liquid/gas), cumulative hours of operation to date for the calendar year; and if applicable the cumulative hours of operation since the last source test required by subparagraph (d)(2)(A).
3. A monthly summary of emissions pursuant to paragraph (d)(1) shall be submitted to the District on or before the last day of the following calendar month.
4. The results of source tests shall be submitted to the District in a form and manner as specified by the Executive Officer within 30 days after testing is completed.
5. Any person using an emission control system as a means of complying with this rule shall maintain daily records of system operation and maintenance which will demonstrate continuous operation and compliance of the emission control device during periods of emission producing activities.

(g) Exemptions

Any person seeking to qualify for any one of the following exemptions has the burden of proving its existing gas turbine unit meets the applicable specified criteria.

1. All provisions of this rule shall not apply to the following:

   (A) Laboratory gas turbine units used in research and testing.

   (B) Gas turbine units operated exclusively for fire fighting and/or flood control.

   (C) Chemical processing gas turbine units.

   (D) All existing pipeline gas turbine units located in the Southeast Desert Air Basin (SEDAB).

2. The provisions of subdivisions (c) and (d), and paragraphs (f)(3), (f)(4) and (f)(5) shall not apply to the following:

   (A) Emergency standby and peaking 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) All existing gas turbine units located in the Southeast Desert Air Basin (SEDAB) which are rated below 4

MW and operate less than 877 hours per year.

(C) All existing gas turbine units located on San Clemente Island which are rated below 4 MW and operate less than 877 hours per year.

However, if the hour-per-year limit is exceeded, the exemption shall be automatically and permanently withdrawn. The operator of any stationary gas turbine exempt under this subparagraph must notify the Executive Officer within seven days if the hour-per-year limit is exceeded. Within 30 days after the date the hour-per-year limit is exceeded, the operator must submit a permit application for modification to equipment to meet the applicable compliance limit within 24 months of the date the hour-per-year limit is exceeded. Included with this permit application, the operator must submit an emission control plan including a schedule of increments of progress for the installation of the required control equipment. This plan and schedule shall be subject to the review and approval of the Executive Officer.

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

(Adopted August 4, 1989)(Amended December 21, 1990)(Amended July 19, 1991)

RULE 1135. EMISSIONS OF OXIDES OF NITROGEN FROM ELECTRIC POWER GENERATING SYSTEMS

(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-hour~~s~~ (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:

District-Wide Daily Limits

Lb-NOx Lb NOx/Net Megawatt (MW) Hr C Per Day ---------- Beginning December 31, 1989 1.10 Beginning December 31, 1990 1.01 Beginning December 31, 1991 0.91 Beginning December 31, 1992 0.82 Beginning December 31, 1993 0.72 Beginning December 31, 1994 0.63 Beginning December 31, 1995 0.53 Beginning December 31, 1996 0.44 Beginning December 31, 1997 0.34 Beginning December 31, 1998 0.25 Beginning December 31, 1999 0.15 13,400

1. 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:

District-Wide Daily Limits

Lb-NOx Lb NOx/Net Megawatt (MW) Hr Per Day ---------- Beginning December 31, 1989 1.60 Beginning December 31, 1990 1.41 Beginning December 31, 1991 1.21 Beginning December 31, 1992 1.02 Beginning December 31, 1993 0.82 Beginning December 31, 1994 0.73 Beginning December 31, 1995 0.63 Beginning December 31, 1996 0.54 Beginning December 31, 1997 0.43 Beginning December 31, 1998 0.29 Beginning December 31, 1999 0.15 5,400 Beginning December 31, 2004 0.15 6,400 Beginning December 31, 2009 0.15 7,400

1. 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:

(A) For the City of Burbank:

District-Wide Daily Limits

Lb NOx/Net Date Megawatt (MW) Hr Lb NOx Per Day ---------- Beginning December 31, 1989 2.47 3,870 Beginning December 31, 1993 1.73 2,763 Beginning December 31, 1996

0.99 1,657 Beginning December 31, 1999 0.20 580 (B) For the City of Glendale:

District-Wide Daily Limits

Lb NOx/Net Date Megawatt (MW) Hr Lb NOx Per Day ----------
Beginning December 31, 1989 2.52 2,940 Beginning December 31, 1993 1.76 2,050 Beginning December 31, 1996 1.00 1,170 Beginning December 31, 1999 0.20 390 (C) For the City of Pasadena:

District-Wide Daily Limits

Lb NOx/Net Megawatt (MW) Hr Lb NOx Per Day ----------
Beginning December 31, 1989 3.05 5,230 Beginning December 31, 1993 2.12 3,680 Beginning December 31, 1996 1.18 2,130 Beginning December 31, 1999 0.20 900

1. 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.

2. 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.
3. 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.
4. 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.
5. 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 ~~an~~ 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:

District-Wide Daily Limits

Lb NOx/Net Megawatt (MW) Hr Lb NOx Per Day ----------
Southern California Edison 0.25 5,360 Los Angeles Department of Water and Power 0.25 2,960

1. 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:

District-Wide Daily Limits

Lb NOx/Net Megawatt (MW) Hr Lb NOx Per Day ----------
Southern California Edison 0.25 20,100 Los Angeles Department of Water Power and 0.25 11,100 Burbank 0.25 870 Glendale 0.25 580 Pasadena 0.25 1,350; and

(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) A 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.

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:
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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:

where e_i = The emission rate of nitrogen oxides in pounds per minute measured every minute,

a_i = The stack gas concentration of nitrogen oxides measured each minute (ppmv),

c_i = The stack gas volumetric flow rate measured each minute (DSCFM).

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:

where e_i = The emission rate of nitrogen oxides in pounds per minute measured every minute,

a_i = The stack gas concentration of nitrogen oxides measured each minute (ppmv) on a dry basis,

b_i = The stack gas concentrations of oxygen measured every minute

r = The number of different types of fuel,

F_{di} = The dry F factor for each type of fuel, the ratio of the dry gas volume of the products of combustion to the heat content of the fuel (DSCF/106 BTU),

d_i = The fuel flow rate for each type of fuel measured every minute,

V_i = The higher heating value of the fuel for each type of fuel.

The product (d_i x V_i) must have units of millions of BTU per minute (10^6 BTU/min).

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:

$$(MWp/MWr)$$

where MWp = Net MW output capacity of the replaced boiler,

and MWr = Net MW output during the one minute period

$= f_i \times 60$

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:

$$\text{net MWH} = VIt \cos ø /106$$

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:

(for NOx concentration)

(for O2 concentration)

(for stack gas volumetric flow rate)

(for fuel flow rates)

Calculate D for each type of fuel firing separately.

(for NOx emissions)

(for net MWH)

P = E/F (for NOx emissions rate)

All concentrations and stack gas flow rates shall be made on a consistent wet or dry basis.

where A = The hourly average stack gas concentration of nitrogen oxides,

a_i = The stack gas concentrations of nitrogen oxides measured every minute,

B = The hourly average oxygen stack concentration,

b_i = The stack gas concentrations of oxygen measured every minute,

C = The hourly average stack gas flow rate,

c_i = The stack gas volumetric flow rates measured every minute,

D_i = The hourly average fuel flow rates, for each type of fuel,

d_i = The fuel flow rate for each type of fuel measured every minute,

E = The hourly average emission rates of nitrogen oxides,

e_i = The emissions of nitrogen oxides in pounds per minute measured every minute,

F = The hourly net MWH of electricity produced,

f_i = The net MWH of electricity produced measured every minute,

P = The emissions rate of nitrogen oxides in pounds per net MWH of electricity produced

n = Number of valid data points during the hour. Indicate any hourly data where n <45.

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:

where G = The daily emissions of nitrogen oxides in units of lb/day,

M = Number of operating minutes during the day,

and N = Number of valid data points during the day. Indicate any daily data where N <90 percent of M.

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:

where H = The daily net MWH of electricity produced during the day, Indicate any daily data where N <90 percent of M.

2.5 The hourly unit-specific emission limit shall be calculated and recorded when more than one fuel is burned during the hour:

where J = Hourly unit-specific emission limit when more than one type of fuel is fired (lb NOx/net MWH of electricity produced)

L_i = Unit-specific emission limit for each type of fuel fired (lb NOx/net MWH of electricity produced)

V_i = Higher heating value of each type of fuel

The product (D_i x V_i) must have units of millions of BTU per hour (10^6 BTU/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:

where A = Accuracy of the volumetric flow measurement system.

F_m = Average response of the volumetric flow measurement system in units of DSCFM.

F_a = Average reference method audit value in units of DSCFM.

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.

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

(Adopted September 16, 1983) (Amended August 5, 1988)(Amended May 5, 1989)
(Amended March 2, 1990)(Amended June 28, 1990)(Amended November 2, 1990)
(Amended December 7, 1990)(Amended August 2, 1991)(Amended April 8, 1994)
(Amended August 12, 1994)(Amended September 8, 1995)(Amended June 14, 1996)

RULE 1136. WOOD PRODUCTS COATINGS

(a) **Purpose and Applicability**

The purpose of Rule 1136 is to reduce volatile organic compounds (VOC) emissions from the application of coatings or strippers to, and surface preparation of, any wood products, including furniture, cabinets, shutters, frames and toys. This rule shall not apply to residential noncommercial operations.

(b) **Definitions**

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

1. **AEROSOL COATING PRODUCT** means 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.
2. **BARRIER COAT - PLASTIC COMPONENTS** is a coating applied to simulated wood components made from polypropylene, polystyrene, polyester, polyurethane, and other plastics to improve adhesion of waterborne coatings.
3. **BINDERS** are non-volatile polymeric organic materials (resins) which form the surface film in coating applications.
4. **CAPTURE EFFICIENCY**, in percent, is the ratio of the weight of the VOC in the effluent stream entering the control device to the weight of VOC emitted from wood product coating operations, both measured simultaneously, and can be calculated by the following equation:

   Capture Efficiency = [Wc/We] x 100
   Where:
   Wc = weight of VOC entering control device
   We = weight of VOC emitted

5. **CLASSIC GUITARS** are replicas of guitars that were originally manufactured before 1965 and are manufactured by the same original processes.
6. **CLEAR SEALER** is a coating containing binders, but not opaque pigments, which seals the wood product prior to application of the subsequent coatings.
7. **CLEAR TOPCOAT** is a final coating which contains binders, but not opaque pigments, and is specifically formulated to form a transparent or translucent solid protective film.
8. **COATING** is a material which is applied to a surface and which forms a film in order to beautify and/or protect such surface.
9. **COMPOSITE WOOD** is a manufactured material consisting of tightly compressed wood fibers bonded with resins which includes, but is not limited to, particleboard, fiberboard and hardboard.
10. **COMPOSITE WOOD EDGE FILLER** is a material which is applied to the edge of a composite wood product, and whose primary function is to build up, or fill the voids and imperfections on the edge of the composite wood product.
11. **CONTROL DEVICE EFFICIENCY**, in percent, is the ratio of the weight of the VOC removed by the control device from the effluent stream entering the control device to the weight of VOC in the effluent stream entering the control device, both measured simultaneously, and can be calculated by the following equation:

    Control Device Efficiency = [(Wc-Wa)/Wc] x 100
    Where:
    Wc = weight of VOC entering control device

Wa = weight of VOC discharged from the control device

12. **CONVENTIONAL AIR SPRAY** means a spray coating method in which the coating is atomized by mixing it with compressed air at an air pressure greater than 10 pounds per square inch (gauge) at the point of atomization. Airless and air assisted airless spray technologies are not conventional air spray because the coating is not atomized by mixing it with compressed air. Electrostatic spray technology is also not considered conventional air spray because an electrostatic charge is employed to attract the coating to the workpiece.
13. **CUSTOM REPLICA FURNITURE** is new, made-to-order furniture that looks like antique furniture, rather than new furniture. It features detailed wood carvings and bruising of the wood to simulate antique furniture.
14. **DIP COAT** is to dip an object into a vat of coating material and drain off any excess coating.
15. **ELECTROSTATIC APPLICATION** is charging of atomized paint droplets for deposition by electrostatic attraction.
16. **EXEMPT COMPOUNDS** - See Rule 102.
17. **EXTREME PERFORMANCE COATING** is a two-component high-solids epoxy, urethane or polyester coating which requires the mixing of a resin and a catalyst, and is applied to a wood product to achieve a high gloss and/or high film build coat which cannot be achieved with a low-VOC coating, or to protect the wood product from one or more of the following environmental conditions:

    (A) Repeated scrubbing with industrial grade detergents, cleaners, or abrasive scouring agents; or

    (B) Frequent exposure to water, to outdoor weather, or to ultraviolet radiation.

18. **FILLER** is a material which is applied to a wood product, and whose primary function is to build up, or fill the voids and imperfections in the wood product to be coated. This shall not include composite wood edge filler.
19. **FLOW COAT** is to coat an object by flowing a stream of coating over an object and draining off any excess coating.
20. **GLAZES** are a type of stain used to soften or blend the original color without obscuring it.
21. **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 For coatings that contain reactive diluents, the VOC content of the coating is determined after curing. The grams of VOC per liter of coating 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, in grams, emitted into the atmosphere during curing

W_w = weight of water, in grams, emitted into the atmosphere during curing
W_{es} = weight of exempt compounds, in grams, emitted into the atmosphere during curing
V_m = volume of the material, in liters, prior to reaction
V_w = volume of water, in liters, emitted into the atmosphere during curing
V_{es} = volume of exempt compounds, in liters, emitted into the atmosphere during curing

22. **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

23. **HIGH FILM BUILD** is when the dry-film thickness per application is greater than four thousandths of an inch.
24. **HIGH GLOSS** is when a coating surface shows a reflectance of 75 or more on a 60 degree meter.
25. **HIGH-SOLIDS STAINS** are stains containing more than 1 pound of solids per gallon of material, and include wiping stains, glazes, and opaque stains.
26. **HIGH-VOLUME, LOW-PRESSURE (HVLP) SPRAY** is an equipment used to apply coating by means of a spray gun which is designed to be operated and which is operated between 0.1 and 10.0 pounds per square inch gauge (psig) air pressure, measured dynamically at the center of the air cap and at the air horns.
27. **INK** is a fluid that contains dyes and/or colorants and is used to make markings, but not to protect surfaces.
28. **JAPANS** are saturated, pure pigments ground in a varnish-like vehicle used as a stain or glaze to create artistic effects, including but not limited to, dirt, old age, smoke damage, and simulated marble and wood grain.
29. **LOW-SOLIDS COATING** is a coating containing 1 pound, or less, of solids per gallon of material.
30. **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.
31. **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.
32. **OVERALL CONTROL EFFICIENCY** (C.E.), in percent, is the ratio of the weight of the VOC removed by the emission control system, to the total weight of VOC emitted from wood product coating operations, both measured simultaneously, and can be calculated by the following equations:

C.E. = [(Wc-Wa)/We] x 100
C.E. = [(Capture Efficiency) x (Control Device Efficiency)]/100
Where:
Wc = weight of VOC entering control device
Wa = Weight of VOC discharged from the control device
We = weight of VOC emitted

33. **PIGMENTED PRIMERS, SEALERS, AND UNDERCOATS** are opaque coatings which contain binders and colored pigments formulated to hide the wood surface, that are applied prior to the topcoat to provide a firm bond, level the wood product surface, or seal the wood product surface.
34. **PIGMENTED TOPCOAT** is a final opaque coating which contains binders and colored pigments, and is specifically formulated to hide the wood surface and form a solid protective film.
35. **POTENTIAL TO EMIT** means the maximum capacity of a facility to emit any air pollutant under its physical

and operational design. Any physical or operational limitation on the capacity of the facility to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation, emissions, or on the type or amount of material combusted, stored, or processed, shall be treated as part of its design if the limitation is enforceable by the EPA Administrator.

36. **POUNDS OF VOC PER POUND OF SOLIDS** is the weight of VOC per weight of coating solids within any given volume of coating and can be calculated by the following equation:

$$\text{Pounds of VOC per Pound of Solids} = \frac{W_s - W_w - W_{es}}{W_r}$$

Where: W_s = weight of volatile compounds in pounds W_w = weight of water in pounds W_{es} = weight of exempt compounds in pounds W_r = weight of coating solids in pounds

For coatings that contain reactive diluents, the VOC content of the coating is determined after curing. The pounds of VOC per pound of coating solids shall be calculated by the following equation:

$$\text{Pounds of VOC per Pound of Solids} = \frac{W_s - W_w - W_{es}}{W_r}$$

Where:

W_s = weight of volatile compounds, in pounds, emitted into the atmosphere during curing

W_w = weight of water, in pounds, emitted into the atmosphere during curing

W_{es} = weight of exempt compounds, in pounds, emitted into the atmosphere during curing

W_r = weight of coating solids, in pounds, prior to reaction

37. **REACTIVE DILUENT** is a liquid which is a VOC during application and one in which, through chemical or physical reactions, such as polymerization, becomes an integral part of a finished coating.
38. **RATE PER DAY** is the amount applied between 12:00 a.m. and 11:59 p.m. on the same calendar day.
39. **RATE PER CALENDAR YEAR** is the amount applied between 12:00 a.m. January 1 and 11:59 p.m. December 31.
40. **REFINISH** is the recoating of wood products that have been previously coated.
41. **REPAIR COATING** is a coating used to recoat portions of a wood product which has sustained damage to the coating following normal painting operations.
42. **ROLL COATER** is a series of mechanical rollers that applies a thin coating on the wood product.
43. **SHUTTER** is a movable screen or cover for a window, usually hinged and often fitted with louvers.
44. **SIMULATED WOOD MATERIALS** are materials, such as plastic, glass, metal, paper etc., that are made to give a wood-like appearance or are processed like a wood product.
45. **STENCIL COATING** is an ink or a pigmented coating which is rolled or brushed onto a template or stamp in order to add identifying letters and/or numbers to wood products.
46. **STRIPPER** is a liquid used to remove cured coatings, cured inks and/or cured adhesives.
47. **TONER** is a wash coat which contains binders and dyes or pigments to add tint to a coated surface.
48. **TOUCH-UP COATING** is a coating used to cover minor coating imperfections appearing after the main coating operation.
49. **TRANSFER EFFICIENCY** is 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.
50. **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:

W_i = Weight of the "i"th VOC compound, in grams (g)

W_w = Weight of water, in grams (g)

W_e = Weight of exempt compound, in grams (g)

MW_i = Molecular weight of the "i"th VOC compound, in g/g-mole

MW_w = Molecular weight of water, in g/g-mole

MW_e = Molecular weight of exempt compound, in g/g-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

51. **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.
52. **WASHCOAT** is a coating that contains no more than 1.0 pound of solids per gallon of material, and which is used to seal wood product surfaces, for any of the following purposes:

    (A) to prevent undesired staining,

    (B) to control penetration,

    (C) to provide a barrier when paper laminates are applied to the wood product,

    (D) to seal glazes,

    (E) to improve adhesion of a waterborne topcoat.

53. **WOOD PRODUCTS** are those surface-coated room furnishings which include cabinets (kitchen, bath, and vanity), tables, chairs, beds, sofas, shutters, art objects, and any other coated objects made of wood, composite wood, simulated wood material used in combination with wood or composite wood; and/or paper laminated on composite wood.
54. **WOOD PRODUCT COATING APPLICATION OPERATIONS** are a combination of coating application steps which may include use of spray guns, flash-off areas, spray booths, ovens, conveyors, and/or other equipment operated for the purpose of applying coating materials.

(c) **Requirements**

1. VOC Content of Coatings and Strippers

   (A) A person or facility shall not apply any coating to a wood product which has a VOC content, including any VOC-containing material added to the original coating supplied by the manufacturer, which exceeds the applicable limit specified below:

(i) **VOC LIMITS**
Grams Per Liter (lb/gal) of Coating, [lbs VOC/lb of solids],
Less Water and Less Exempt Compounds

COATING	Current Limit	On and After 7/1/97 I or II		On and After 7/1/2005
Clear Sealers	680 (5.7) [3.36]	550 (4.6) [1.39]	680 (5.7) [3.36]	275 (2.3) [0.36]
Clear Topcoat	680 (5.7) [2.99]	550 (4.6) [1.37]	275 (2.3) [0.35]	275 (2.3) [0.35]
Pigmented Primers, Sealers & Undercoats	600 (5.0) [1.08]	550 (4.6) [1.06]	600 (5.0) [1.08]	275 (2.3) [0.21]
Pigmented Topcoats	600 (5.0) [1.38]	550 (4.6) [1.10]	275 (2.3) [0.25]	275 (2.3) [0.25]

Effective July 1, 1997, a person or facility shall use coatings on a wood product that comply with either all VOC limits in column I or all VOC limits in column II. A person or facility that applies a primer, sealer or undercoat, but not a topcoat, to a wood product, shall be subject to column I for that wood product.

(ii) Notwithstanding the requirements of clause (c)(1)(A)(i), a person or facility that applies a topcoat and a primer, sealer or undercoat to a shutter may, until July 1, 2005, choose to comply with the VOC limits specified below for that shutter:

VOC LIMITS
Grams Per Liter, (lb/gal) of Coating, [lbs VOC/lb of solids],
Less Water and Less Exempt Compounds

COATING	
Clear Sealers	275 (2.3) [0.36]
Clear Topcoat	680 (5.7) [2.99]
Pigmented Primers, Sealers & Undercoats	275 (2.3) [0.33]
Pigmented Topcoats	600 (5.0) [1.38]

(iii)
VOC LIMITS
Grams Per Liter, (lb/gal) of Coating, [lbs VOC/lb of solids],
Less Water and Less Exempt Compounds

COATING	Current Limit	On and After 7/1/97	On and After 7/1/2005
Barrier Coat - Plastic Components	800 (6.7) [6.3]	760 (6.3) [3.9]	275 (2.3) [0.28]
Composite Wood Edge Filler	680 (5.7) [2.34]	550 (4.6) [1.15]	275 (2.3) [0.31]
Extreme Performance Coatings	420 (3.5) [0.51]	420 (3.5) [0.51]	275 (2.3) [0.33]
Fillers	500 (4.2) [0.66]	500 (4.2) [0.66]	275 (2.3) [0.18]
High-Solid Stains	700 (5.8) [2.84]	550 (4.6) [1.23]	350 (2.9) [0.42]
Inks	500 (4.2) [0.96]	500 (4.2) [0.96]	500 (4.2) [0.96]
Mold-Seal Coatings	750 (6.3) [4.2]	750 (6.3) [4.2]	750 (6.3) [4.2]
Multi-Colored Coatings	685 (5.7) [2.6]	685 (5.7) [2.6]	275 (2.3) [0.33]

VOC LIMITS
Grams Per Liter (lb/gal) of Material

COATING	Current Limit	On and After 7/1/97	On and After 7/1/2005
Low-Solids Barrier Coat - Plastic Components	800 (6.7)	760 (6.3)	120 (1.0)
Low-Solid Stains, Toners, and Washcoats	800 (6.7)	480 (4.0)	120 (1.0)

Any coating subject to this rule that meets any of the three VOC limit formats (grams per liter, lb/gal, or lbs VOC/lb of solids) is in compliance with this subparagraph.

(B) A person shall not use a stripper on wood products unless:

(i) it contains less than 350 grams of VOC per liter of material; or

(ii) the VOC composite vapor pressure is 2 mm Hg (0.04 psia) or less at 20°C (68°F).

(C) Owners and/or operators may comply with provisions of paragraph (c)(1)(A) and (B) by using an approved air pollution control system, consisting of collection and control devices, which reduces VOC emissions from the application of wood product coatings or strippers by an equivalent or greater amount than the limits specified in subparagraphs (c)(1)(A) and (B), with the written approval of the Executive Officer. The minimum required overall control efficiency of an emission control system at which an equivalent or greater level of VOC reduction will be achieved shall be calculated by the following equation:

$$C.E. = \left[1 - \left\{ \frac{(VOC_{LWc})}{(VOC_{LWn\ Max})} \times \frac{1 - (VOC_{LWn\ Max}/D_{n\ Max})}{1 - (VOC_{LWc}/D_c)} \right\} \right] \times 100$$

Where: C.E. = Control Efficiency, percent

VOC_{LWc} = VOC Limit of Rule 1136, less water and less exempt compounds, pursuant to subparagraph (c)(1)(A).

$VOC_{LWn\ Max}$ = Maximum VOC content of non-compliant coating used in conjunction with a control device, less water and less exempt compounds.

$D_{n\ Max}$ = Density of solvent, reducer, or thinner contained in the non-compliant coating, containing the maximum VOC content of the multicomponent coating.

Dc = Density of corresponding solvent, reducer, or thinner used in the compliant coating system = 880 g/L.

(D) Emissions Averaging Provisions

(i) Owners or operators may comply with the provisions of subparagraph (c)(1)(A) by using an averaging approach for all or a portion of the coatings used at the facility, provided all requirements of this subparagraph are met. The owner or operator shall demonstrate that actual emissions from the coatings being averaged are less than or equal to 90 percent of the allowable emissions, on a daily basis, using the following inequality:

Where:

VOC_i = VOC content limit of coating "i" (pounds (lb) of VOC/gallon of material for low solids coatings; and lb VOC/lb of solids for all other coatings), as required by subparagraph (c)(1)(A);

U_i = Usage of coating "i" (gallons of material for low-solids coatings; and lb of solids for all other coatings); and

ER_i = Actual VOC content of coating "i", as applied (lb of VOC/gallon of material for low-solids materials; and lb VOC/lb of solids for all other coatings).

The 0.9 multiplier above is not applicable after June 30, 2005, or to facilities with a potential to emit less than 10 tons of VOC per year. Any wood product coating not included in the emission averaging shall comply with the VOC limits in subparagraph (c)(1)(A).

(ii) Emissions Averaging Plan (Plan)

Owners or operators shall submit a Plan, pursuant to Rule 221 - Plans, to the Executive Officer to participate in emissions averaging. The plan may not be implemented until it is approved in writing by the Executive Officer. Submittal of the Plan does not provide an exemption from the rule requirements. The Plan shall include, at a minimum:

(I) A description of the wood product coatings to be included in the averaging program; and

(II) A description of the quantification and recordkeeping procedures for coating usage; coating VOC and solids content; VOC emissions; and calculations to show daily compliance with clause (c)(1)(D)(i).

2. Transfer Efficiency
A person or facility shall not apply coatings to wood products subject to the provisions of this rule unless the coating is applied with properly operating equipment, according to the equipment manufacturer's operating procedures, and by the use of one of the following methods:

(A) electrostatic application; or

(B) flow coat; or

(C) dip coat; or

(D) high-volume, low-pressure (HVLP) spray; or

(E) paint brush; or

(F) hand roller; or

(G) roll coater; or

(H) such other coating application methods as are demonstrated to the Executive Officer to be capable of achieving at least 65 percent transfer efficiency, and for which written approval of the Executive Officer has been obtained.

3. Solvent Cleaning Operations; Storage and Disposal of VOC-containing Materials
Solvent cleaning operations and the storage and disposal of VOC containing materials are subject to the provisions of Rule 1171 - Solvent Cleaning Operations.

(d) **Recordkeeping Requirements**
Records shall be maintained pursuant to Rule 109 or pursuant to an approved Emissions Averaging Plan, whichever is applicable. If compliance with the VOC limits in subparagraph (c)(1)(A) is based on the pounds of VOC per pound of solids format, then the operator shall keep a record of the VOC content of the coating in pounds of VOC per pound of solids in addition to complying with the requirements of Rule 109.

(e) **Prohibition of Specifications**
A person shall not specify the use in the District of any coating to be applied to any wood products subject to the provisions of this rule that does not meet the limits and/or requirements of this rule. The requirements of this paragraph shall apply to all written or oral contracts.

(f) **Test Methods**

1. The VOC content of coatings and strippers shall be determined by:

   (A) United States Environmental Protection Agency (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), or Method 304 (Determination of Volatile Organic Compounds (VOCs) in Various Materials) in the South Coast Air Quality Management District (SCAQMD) "Laboratory Methods of Analysis for Enforcement Samples" manual.

   (B) The exempt compounds' content shall be determined by:

      (i) Methods 302 (Distillation of Solvents from Paints, Coatings and Inks) and 303 (Determination of Exempt Compounds) in the SCAQMD "Laboratory Methods of Analysis for Enforcement Samples" manual.

      (ii) 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.

2. Film build thickness shall be determined using American Society of Testing Materials (ASTM) Test Method D5235, as adopted in 1992.
3. Gloss shall be determined using ASTM Test Method D 523, as adopted in 1989.
4. For the purpose of calculating the VOC composite vapor pressure of a VOC-containing material, the composition of the material shall be based on the known formulation of the material or determined by Method 308 in the SCAQMD "Laboratory Methods of Analysis for Enforcement Samples".
5. For determining the concentration of VOC in a gas stream and the efficiency of a control device, the total organic compound concentrations shall be determined using USEPA Test Method 25, 25A, or SCAQMD Method 25.1 (Determination of Total Gaseous Non-Methane Organic Emissions as Carbon) as applicable, and the concentration of exempt compounds shall be determined using either USEPA Test Method 18 or California Air Resources Board Method 422.
6. The capture efficiency of an emission control system as defined in paragraph (b)(3) shall be determined by a minimum of three sampling runs subject to the data quality objective (DQO) presented in the USEPA technical guidance document “Guidelines for Determining Capture Efficiency”, January 9, 1995. Individual capture efficiency test runs subject to the USEPA technical guidelines shall be determined by:

   (A) Applicable USEPA Methods 204, 204A, 204B, 204C, 204E, and/or 204F; or

   (B) The SCAQMD “Protocol for Determination of Volatile Organic Compounds (VOC) Capture Efficiency”; or

(C) Any other method approved by the USEPA, the California Air Resources Board, and the SCAQMD Executive Officer.

7. 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."
8. 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.
9. All test methods referenced in this subdivision shall be the most recently approved version.

(g) **Continuous Monitors**

1. Each coating operation subject to subparagraph (c)(1)(C) shall have a continuous monitor, as approved by the Executive Officer, for any add-on control device used to meet the control requirement.
2. Records of the monitoring devices pursuant to paragraph (g)(1) and other data necessary to demonstrate compliance with the control requirements shall be maintained on the premises and made accessible for a period of two years to the Executive Officer in a form and manner as specified by the Executive Officer.
3. Compliance with subparagraph (c)(1)(C) shall be determined by source testing and/or evaluating continuous monitor data.
4. Each monitoring device used pursuant to paragraph (g)(1) shall be calibrated in a manner approved by the Executive Officer and maintained in optimum working order.

(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 unless compliance with the limits specified in this rule is achieved.

(i) **Alternative Emission Control Plan**
An owner or operator may achieve compliance with paragraph (c)(1) by means of an Alternative Emission Control Plan pursuant to Rule 108.

(j) **Progress Reports**
Owners or operators shall submit a progress report to the Executive Officer by January 1, 2003. The Progress Report shall include at a minimum:

1. a statement that the facility or facilities are in compliance with the final Rule 1136 VOC limits; or
2. for each facility, a description of their wood coating process, the wood product types, the wood coatings currently in use and their VOC contents, the low-VOC wood coatings which will be tested, any expected wood coating process or control equipment modifications, and the results of previous low-VOC coating tests. Facilities shall also report if they are planning to use Mobile Source Emission Reduction Credits (MSERCs) pursuant to Regulation XVI or other alternative emission reductions allowed by District rules.

(k) **Air Quality Management Plan (AQMP) Technology Assessment Audit**
The Executive Officer shall audit Rule 1136 by July 1, 2003 to assess the feasibility of the final VOC limits and whether new technology could provide additional reductions to meet the District's AQMP objectives.

(l) **Exemptions**

1. The provisions of paragraphs (c)(1) and (c)(2) of this rule shall not apply to facilities that use less than one gallon per day of coating, as applied, subject to this rule.
2. The provisions of this rule shall not apply to coating operations subject to, and in compliance with, the provisions of Rule 1104.
3. The provisions of subparagraphs (c)(1)(A) and (C) shall not apply to the manufacturing of classic guitars until July 1, 2005.
4. Refinishing, Replacement, and Custom Replica Furniture Operations: Until July 1, 1998, the provisions of

subparagraphs (c)(1)(A) and (C) shall not apply to any refinishing operations necessary for preservation, to return the wood product to original condition, to replace missing furniture to produce a matching set, or to produce custom replica furniture, provided records are maintained daily for two years as to the amount, type and VOC content of each coating used.

5. The provisions of paragraph (c)(1) shall not apply to touch-up and repair coatings until July 1, 2005.
6. The provisions of this rule shall not apply to aerosol coating products.
7. Notwithstanding the requirements of Rule 109(c)(1), Recordkeeping for Volatile Organic Compound Emissions, any facility that switches to waterborne coatings that meet the July 1, 2005 VOC limits may request written approval from the Executive Officer to record data on up to a quarterly basis, provided the Executive Officer determines that such recordkeeping allows for an equivalent level of enforceability.
8. Notwithstanding the provisions of paragraph (c)(2), a person or facility may use:

   (A) any spray equipment that uses only coatings that comply with the July 1, 2005 VOC limits; or

   (B) any spray equipment, except conventional air spray, that uses only coatings that contain 550 grams, or less, of VOC per liter of coating, less water and less exempt compounds.

9. The provisions of paragraph (c)(2) shall not apply to air brushes with a capacity of four fluid ounces, or less.
10. The provisions of subparagraph (c)(1)(A) shall not apply to japans, provided the VOC content is 700 grams of VOC per liter of coating, less water and exempt compounds, or less, as applied.
11. Notwithstanding the provisions of subparagraph (c)(1)(A), a person or facility may add up to 10% by volume of VOC to a topcoat, primer, sealer or undercoat to avoid blushing of the finish during high humidity provided that:

    (A) the coating is not applied from April 1 to October 31 of any year; and

    (B) the coating contains acetone and no more than 550 grams of VOC per liter of coating, less water and exempt compounds, prior to the addition of VOC.

(Adopted February 1, 2002)

RULE 1137. PM10 EMISSION REDUCTIONS FROM WOODWORKING OPERATIONS

(a) Purpose

The purpose of this rule is to reduce PM10 emissions from woodworking operations.

(b) Applicability

This rule applies to any woodworking facility that uses a pneumatic conveyance system to collect particulate matter from woodworking equipment.

(c) Definitions

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

(1) BAGHOUSE SYSTEM means a baghouse, cartridge filter, or a cyclone followed by an after filter, installed and connected to a pneumatic conveyance system.

(2) CUBIC FEET PER MINUTE is calculated by multiplying the air velocity by the cross sectional area of the ductwork.

(3) EMISSION CONTROL DEVICE is a combination of capture systems(s) and control equipment used to reduce, eliminate or control the release of particulate matter from a pneumatic conveyance system to the

atmosphere (i.e., cyclone, baghouse, misting system, etc.).

(4) EXISTING WOODWORKING FACILITY means a woodworking facility in existence prior to July 1, 2002.

(5) NEW OR EXPANDED PNEUMATIC CONVEYANCE SYSTEM means a separate pneumatic conveyance system constructed on or after July 1, 2002 or changes made to an existing conveyance system on or after July 1, 2002 that increase the cubic feet per minute of an existing pneumatic conveyance system by more than 20 percent over the design capacity of the system in existence as of July 1, 2002.

(6) NEW OR EXPANDED WOODWORKING FACILITY means any woodworking facility not in existence before July 1, 2002 or any existing woodworking facility that installs a new or expanded pneumatic conveyance system on or after July 1, 2002.

(7) OPERATOR is any person who operates a facility subject to the requirements of this rule.

(8) PNEUMATIC CONVEYANCE SYSTEM means an arrangement of devices such as hoods, ductwork, storage bins and fan(s) to collect particulate matter-

laden air from the process area and direct it to the atmosphere.

(9) SAWDUST EMISSIONS are minute particles of wood formed by the sawing, sanding, shaping, and/or drilling of wood.

(10) STAND ALONE EMISSION CONTROL DEVICE means a capture system connected directly to woodworking equipment and vented to an attached bag or by tubing to a container located inside an enclosed building within a woodworking facility.

(11) WASTE DISPOSAL ACTIVITIES involve the movement of sawdust emissions from a sawdust storage bin to another container or haul vehicle, and excludes the initial disconnection of an enclosure or shroud system from the sawdust storage bin.

(12) WOODWORKING EQUIPMENT includes, but is not limited to, ripsaws, panel saws, cut-off saws, matchers, stickers, grinders, moulders, planers, jointers, CNC routers, spindle sanders, drum sanders, edge sanders, tenoners, mortisers, groovers, borers, and dovetailers.

(13) WOODWORKING FACILITY is any facility with woodworking equipment or groups of woodworking equipment used in the production of wood products to

be sold or wood products to be improved or altered for profit, that 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). Examples of woodworking facilities include, but are not limited to, lumbermills, furniture manufacturers, planing mills, furniture refinishing shops, cabinet shops, sash and door manufacturers, and carpenter shops. Examples of wood products include, but are not limited to, goods manufactured from plywood, particleboard, medium-density fiberboard, pine, oak, cedar, alder, and all other species of wood.

(d) Requirements

(1) On or after July 1, 2002, an operator of an existing woodworking facility shall not remove any baghouse system unless it is replaced with the same type of emission control device.

(2) On or after January 1, 2004, an operator of an existing woodworking facility shall not operate any equipment, activity or operation connected to a pneumatic conveyance system unless the sawdust emissions are

completely vented to an emission control device in operation such that there are no visible emissions exiting from external ductwork and the emission control device at any time, other than the initial 15 minutes after start up or the final 15 minutes prior to shutdown.

(3) On or after July 1, 2002, an operator of a new or expanded woodworking facility shall:

(A) completely vent the sawdust emissions from its new or expanded pneumatic conveyance system to a baghouse system; and

(B) operate the baghouse system such that there are no visible emissions exiting from external ductwork and the baghouse system at any time, other than the initial 15 minutes after start up or the final 15 minutes prior to shutdown; and

(C) operate and maintain the baghouse system in accordance with manufacturer specifications.

(4) On or after July 1, 2002, any operator of a woodworking facility with a pneumatic conveyance system shall not operate unless the sawdust emissions are reduced through an enclosure or shroud connected from the emission control device to the waste storage

bin so that there are no visible emissions at any time, other than the initial 15 minutes after start up or the final 15 minutes prior to shutdown.

(5) On or after July 1, 2002, any operator of a woodworking facility with a pneumatic conveyance system shall cover sawdust storage bins at all times except during the initial disconnection from the enclosure or shroud and during waste disposal activities.

(6) On or after July 1, 2002, any operator of a woodworking facility with a pneumatic conveyance system shall not cause visible emissions from waste disposal activities to cross any property line by taking measures, as necessary, such as, but not limited to, use of water or disposal bags, or prohibition of on-site waste transfer activities.

(e) Reporting Schedule

(1) No later than July 1, 2002, the operator of an existing woodworking facility subject to this rule shall submit all of the following to the Executive Officer and retain a copy on-site and make said copy available upon request:

(A) Operator's name and contact information;

(B) Type of operation (i.e., lumberyard, cabinet/furniture manufacturer, etc.);

(C) Fan(s) diameter;

(D) Fan(s) horsepower;

(E) Description of emission control device(s), including but not limited to:

(i) Type and model of equipment (i.e., cyclone, cyclone with after filter, cartridge collector, vacuum collection bag, industrial high-efficiency baghouse, etc); and

(ii) Diameter of cyclone outlet (if applicable).

(F) Estimate of sawdust generated per month; and

(G) Description of sawdust disposal procedures.

(2) Within 90 days of operation of a new or expanded woodworking facility, the information required in paragraph (e)(1) shall be submitted to the Executive Officer and a copy retained on-site and made available upon request.

(f) Exemptions

(1) The requirements of subdivision (d) and (e) shall not apply to the following:

(A) Woodworking equipment that vents solely to a stand alone emission control device or into an enclosed room.

(B) Woodworking equipment used in demonstrations that last less than 30 consecutive days at one location.

(2) The requirements of paragraph (d)(6) shall not apply when maximum instantaneous wind gusts exceed 25 miles per hour, provided that the operator applies water to the entire surface area after opening the sawdust storage bin prior to initiating waste disposal activities.

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

RULE 1138. CONTROL OF EMISSIONS FROM RESTAURANT OPERATIONS

(Adopted November 14, 1997)

(a) Applicability

This rule applies to owners and operators of commercial cooking operations, preparing food for human consumption. The rule requirements currently apply to chain-driven charbroilers used to cook meat. All other commercial restaurant cooking equipment including, but not limited to, under-fired charbroilers, may be subject to future rule provisions.

(b) Definitions

1. CATALYTIC OXIDIZER means a control device which burns or oxidizes smoke and gases from the cooking process to carbon dioxide and water, using an infrastructure coated with a noble metal alloy.
2. CHAIN-DRIVEN CHARBROILER is a semi-enclosed cooking device with a mechanical chain which automatically moves food through the device and consists of three main components: a grill, a high temperature radiant surface, and a heat source.
3. CHARBROILER means a cooking device composed of the following three major components: a grated grill, a high-temperature radiant surface and a heat source. The heat source heats the high-temperature radiant surface, which provides the heat to cook the food resting on the grated grill. This includes, but is not limited to broilers: grill charbroilers, flamebroilers and direct-fired barbecues.
4. EXISTING CHAIN-DRIVEN CHARBROILER means any chain-driven charbroiler operating on or before November 14, 1997.
5. MEAT, for the purposes of this rule, includes beef, lamb, pork, poultry, fish, and seafood.
6. NEW CHAIN-DRIVEN CHARBROILER means any chain-driven charbroiler initially installed and operated after November 14, 1997.
7. RESTAURANT means any stationary commercial cooking establishment which prepares food for human consumption.
8. UNDER-FIRED CHARBROILER means a cooking device which has a grill, a high temperature radiant surface, and a heat source which is located below the food.
9. WEEKLY means a consecutive seven-day period.

(c) Requirements

1. No person shall operate an existing chain-driven charbroiler on and after (twenty-four months from date of adoption) unless it is equipped and operated with a catalytic oxidizer control device, and the combination charbroiler/catalyst has been tested in accordance with the test method specified in subdivision (g) and certified by the Executive Officer. Other control devices or methods may be used, if found, in accordance with the test method specified in subdivision (g), to be as or more effective than the catalytic oxidizer in reducing particulate matter (PM) and volatile organic compounds (VOC) (as defined in Rule 102) emissions and certified by the Executive Officer.
2. Notwithstanding provisions of paragraph (c)(1) of this rule, persons operating an existing chain-driven charbroiler with permitted control equipment may elect to maintain that equipment for the duration of its functional life not to exceed 10 years from (the date of adoption). At such time, such persons may elect to either replace the existing control equipment with a catalytic oxidizer control device which in combination with the chain-driven charbroiler has been tested in accordance with the test method specified in subdivision (g) and certified by the Executive Officer, or other control device or method found to be as or more effective than the catalytic oxidizer in reducing PM and VOC emissions in accordance with the test method specified in subdivision (g) and certified by the Executive Officer.
3. No person shall operate a new chain-driven charbroiler after November 14, 1997 unless it is equipped and

operated with a catalytic oxidizer control device, and this combination charbroiler/catalyst has been tested in accordance with the test method specified in subdivision (g) and certified by the Executive Officer, or other control device or method if found to be as or more effective than the catalytic oxidizer in reducing PM and VOC emissions in accordance with the test protocol specified in subdivision (g) and certified by the Executive Officer.

4. Catalytic oxidizers or other control devices shall be maintained in good working order to minimize visible emissions to the atmosphere, and operated, cleaned, and maintained in accordance with the manufacturer's specifications in a maintenance manual or other written materials supplied by the manufacturer or distributor of the catalyst or other control device, or chain-driven charbroiler.

(d) Recordkeeping

1. Owners and operators of chain-driven charbroilers equipped with control equipment shall, at the time of occurrences listed in subparagraphs (d)(1)(A) and (B), record such actions and retain the records for a period of not less than five years. These records shall be made available to a District representative upon request. Records shall consist of:

   (A) the date of installation or changing of any catalyst or, if applicable, other certified control device; and

   (B) the date and time of cleaning and maintenance performed for the catalyst or, if applicable, other certified control device.

2. Owners and operators of chain-driven charbroilers operating under an exemption from provisions of this rule pursuant to subdivision (e), shall maintain weekly records of the amount of meat cooked and monthly records of the amount of meat purchased. These records shall be retained on the restaurant premises for a period of not less than five years and made available to a District representative upon request.
3. Persons may request use of alternative recordkeeping, provided the Executive Officer and EPA have determined, in writing, that the alternative recordkeeping method provides equivalent compliance assurance as the records specified in paragraphs (d)(1) or (d)(2).

(e) Exemption
An owner or operator of a chain-driven charbroiler may apply for an exemption from provisions of paragraphs (c)(1) through (c)(4) and (d)(1):

1. based on accepting a permit condition limiting the amount of meat cooked on the chain-driven charbroiler to less than 875 pounds per week; or
2. by supplying evidence from testing pursuant to the test method specified in subdivision (g), demonstrating that emissions from the chain-driven charbroiler are less than the one pound per day of any criteria air contaminant, and accepting permit conditions necessary to preclude an exceedance of that level of emissions.

(f) Evaluations
The Executive Officer will evaluate Rule 1138 and report to the Governing Board, no later than 18 months from the date of its adoption, to assess the feasibility of emission reductions and whether cost-effective control devices or other methods are available for the control of emissions from under-fired charbroilers and potentially other commercial restaurant cooking equipment.

(g) Test Methods
The District's Protocol - Determination of Particulate and Volatile Organic Compound Emissions from Restaurant Operations shall be used to determine the pounds of PM and VOC per 1,000 pounds of meat cooked.

South Coast Air Quality Management District

(Adopted November 4, 1983)(Amended December 7, 1990)
(Amended March 6, 1992)(Amended November 17, 2000)

RULE 1141.1. COATINGS AND INK MANUFACTURING

(a) Definitions

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

(1) 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) EXEMPT COMPOUND is as defined in Rule 102.

(3) GRINDING MILLS are mills with cylindrical chambers containing grinding media such as balls, pebbles, or sand that grind and disperse coating solids.

(4) HIGH SPEED DISPERSION MILL is a mixer with one or more blades that rotate at high speed in order to disperse coating solids.

(5) INK MANUFACTURER is an establishment that mixes, blends, and/or compounds printing inks and is classified as 2893 in the Standard Industrial Classification Manual.

(6) PASTE INK is an ink that contains, primarily, McGee oil and glycol as solvent.

(7) ROLLER MILLS are mills with horizontal rollers that grind and disperse coating solids.

(8) VOLATILE ORGANIC COMPOUND (VOC) is as defined in Rule 102.

(9) WATERBASED COATING is a paint, varnish, lacquer, enamel, shellac, sealer or ink that contains ten percent or more, by weight, of water, as determined by the analytical procedures in SCAQMD Test Method 304 (SCAQMD "Laboratory Methods of Analysis for Enforcement Samples" manual).

(b) Requirements

(1) 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) 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 VOC 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 VOC into the atmosphere and 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 VOC into the atmosphere and is approved by the Executive Officer.

(3) Grinding mills installed after January 1, 1985 shall have fully enclosed screens.

(c) Recordkeeping Requirements

A coating or ink manufacturer shall maintain daily records. Alternatively, records may be kept on a monthly basis provided the coating or ink manufacturing equipment or process is not subject to a daily production limit or daily VOC limit in any applicable District rule(s) or permit(s). Such records shall be kept at the manufacturing facility for at least two years, and shall be made available to the District upon request. The records shall include the following:

(1) the type and amount of each coating or ink manufactured;

(2) the type and amount of the VOC containing materials used in the manufacture of each coating or ink;

(3) the type, amount and VOC content of all clean-up solvents used (including exempt compounds).

(d) Exemptions

(1) The provisions of this rule, except subdivision (c), 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 this rule, except subdivision (c), shall not apply to a coatings and/or ink manufacturer which produces less than 11,000 gallons of coatings and/or ink in any one calendar month.

(3) The provisions of paragraph (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.

(4) The provisions of paragraphs (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.

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(Adopted July 6, 1984)(Amended November 17, 2000)
(Amended January 11, 2002)

RULE 1141.2. SURFACTANT MANUFACTURING

(a) Applicability

This rule applies to all manufacturers of surface-active agents, including detergents, wetting agents, and emulsifiers.

(b) Definitions

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

(1) CONDENSER is a jacketed tube which has a cooling fluid, often water, flowing through the jacket and which cools and liquefies gases flowing through the inside of the tube.

(2) DEGASSER is any piece of equipment which removes dissolved gases from liquids.

(3) LABORATORY APPROVAL PROGRAM (LAP) is a program administered by the District that grants test-method-specific approvals to independent testing laboratories or firms that perform tests to determine compliance with District rules and regulations.

(4) MINERALIZER is any piece of equipment in which minerals or chemicals, such as lime or iodine, are suspended in a surfactant.

(5) NEUTRALIZER is any piece of equipment in which materials are added to a liquid in order to change the acidity or alkalinity of the liquid.

(6) SOAP is a substance used with water to produce suds for washing or cleaning and is the sodium or potassium salts of fatty acids produced by the action of an alkali, such as caustic soda or potash, on fats or oils.

(7) STRIPPER is any piece of equipment which removes a material from a mixture of materials.

(8) SURFACTANT is a surface-active agent, which is any compound that reduces surface tension or interfacial tension, when in solution. Surfactants are divided into three categories: detergents, wetting agents, and emulsifiers.

(9) SURFACTANT MANUFACTURER is a person who produces a synthetic surfactant, most commonly by reacting an organic compound with a sulfonating or sulfating compound.

(10) SURFACTANT MANUFACTURING EQUIPMENT includes any or all of the following equipment: surfactant reactors, process condensers, degassers, neutralizers, strippers, and mineralizers.

(11) SURFACTANT REACTOR is any equipment is which organic and/or other materials are reacted to produce a surfactant; this may include stripping columns, condensers, and water separators.

(12) VENT is a port or opening whose function is to allow gases to discharge to the atmosphere when leaving a reactor or other equipment.

(13) VOLATILE ORGANIC COMPOUND (VOC) is as defined in Rule 102.

(c) Requirements

A surfactant manufacturer shall not produce surfactants unless:

(1) the total emissions of volatile organic compounds (VOC) from the surfactant manufacturing equipment, before being vented to the atmosphere, are reduced:

(A) to 0.5 pound per 1000 pounds of surfactant produced, or

(B) by 95 percent (wt) or more; and

(2) all ports used for inspection, taking samples, or adding ingredients are closed when not in use.

(d) Compliance

(1) A surfactant manufacturer shall:

(A) On or before January 1, 1985, submit for District approval, a Compliance Plan describing the methods and equipment to be used to achieve compliance with subparagraph (c)(1)(A) or (c)(1)(B), and

(B) On or before July 1, 1986, submit applications for new permits to construct or operate, as necessary, for new or modified equipment involved in such methods.

(2) On or after July 1, 1986, a surfactant manufacturer shall operate under the approved conditions specified in the Compliance Plan for compliance with paragraph (c)(1), and/or under conditions included in permits to construct or operate issued for applications submitted pursuant to subparagraph (d)(1)(B).

(e) Test Methods

The following test methods and procedures shall be used to determine compliance with this rule. All test methods referenced below shall be the most recent version issued by the respective organization. Alternative test methods may be used if they are determined to be equivalent and approved in writing by the Executive Officer, the California Air Resources Board, and the U.S. Environmental Protection Agency.

(1) Determination of Efficiency of Emission Control Systems:

(A) The capture efficiency of an emission control system shall be determined by verifying the use of a Permanent Total Enclosure (PTE) and 100% capture efficiency as defined by US EPA Method 204, "Criteria for and Verification of a Permanent or Temporary Total Enclosure." Alternatively, if a US EPA Method 204 defined PTE is not employed, capture efficiency shall be determined using a minimum of three sampling runs subject to data quality criteria presented in the US EPA technical guidance document "Guidelines for Determining Capture Efficiency, January 9, 1995." Individual capture efficiency test runs subject to the US EPA technical guidelines shall be determined by:

(i) The Temporary Total Enclosure (TTE) approach of US EPA Methods 204 through 204F (40 CFR, part 51, Appendix M); or

(ii) The District "Protocol for Determination of Volatile Organic Compounds (VOC) Capture Efficiency."

(B) The control equipment efficiency of an emission control system, on a mass emissions basis, and the VOC concentrations in the exhaust gases shall be determined by US EPA Test Methods 25, Gaseous Nonmethane Organic Emissions, 25A, Gaseous Organic Concentration (Flame Ionization), District Method 25.1, Total Gaseous Non-Methane Organic Emissions, or District Method 25.3, Determination of Low Concentration Non-Ethane Non-Methane Organic Compound Emissions from Clean-fueled Combustion Sources, as applicable. US EPA Test Method 18, (40 CFR, part 60, Appendix A) VOC by Gc, or ARB Method 422,

Exempt Halogenated VOCs I Gases, shall be used to determine emissions of exempt compounds.

(C) The overall efficiency of an emission control system for determining compliance with subparagraph (c)(1)(A) or (c)(1)(B) shall be determined using the following equation (all efficiencies expressed in percent):

Overall Efficiency = (Capture Efficiency) x (Control Equipment Efficiency)/100

(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 version approved by the Executive Officer, CARB, and EPA.

(4) Laboratory Approval

The sampling, analysis, and reporting shall be conducted by a laboratory that has been approved under the District Laboratory Approval Program (LAP) for the cited District reference test methods, where LAP approval is available. For District reference test methods for which no LAP program is available, the LAP approval requirement shall become effective one year after the date that the LAP program becomes available for that District reference test method.

(f) Exemptions

The provisions of this rule shall not apply to:

(1) Soap manufacturing operations,

(2) Facilities that only blend and package surfactants,

(3) Facilities that emit less than 5 pounds per day or less than 110 pounds per calendar month of VOC from surfactant manufacturing. Records of VOCs emitted shall be maintained pursuant to Rule 109.

(g) Fees

For the purpose of determining the appropriate processing fees only, the filing of a Compliance Plan(s) as provided in paragraph (d)(1) shall be considered the

equivalent of filing an application for a permit. The person submitting the Plan shall be assessed a filing and an evaluation fee as described in Rule 306.

South Coast Air Quality Management District

(Adopted July 8, 1983) (Amended November 2, 1984)(Amended Dec. 7, 1990)
(Amended April 3, 1992)(Amended November 17, 2000)

RULE 1141. CONTROL OF VOLATILE ORGANIC COMPOUND EMISSIONS FROM RESIN MANUFACTURING

(a) Definitions

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

(1) BLENDING TANK is a vessel in which resin and/or solvent and/or other materials are added, normally to produce a final product blend.

(2) COMPLETED RESIN is resin solids, solvents, and additives as delivered for sale or use.

(3) CONDENSER is a jacketed tube which has a cooling fluid, often water, flowing through the jacket and which cools and liquefies gases entering the inside of the tube.

(4) CONTINUOUS POLYSTYRENE PROCESS is the reaction of styrene and other ingredients and the purification of the reaction products, to produce a normally uninterrupted flow of resin.

(5) DILUENT RECOVERY SECTION consists of equipment used to separate process diluent from reaction by-products.

(6) EXEMPT COMPOUNDS is as defined in Rule 102.

(7) HIGH-DENSITY POLYETHYLENE RESIN is a linear thermoplastic polymer of ethylene with a density of greater than 0.94 grams per cubic centimeter.

(8) LIQUID-PHASE HIGH-DENSITY POLYETHYLENE SLURRY PROCESS is the reaction of ethylene and other ingredients, and the purification of the reaction products, to produce a normally uninterrupted flow of high-density polyethylene resin.

(9) LIQUID-PHASE POLYPROPYLENE PROCESS is the reaction of propylene and other ingredients, and the purification of the reaction products, to produce a normally uninterrupted flow of resin.

(10) ORGANIC RESIN REACTOR is any piece of equipment in which organic and/or other materials are reacted to produce an organic resin. A reactor may include a stripping column, condensers, and a water separator, whose purpose is to return the evaporated solvent to the reaction vessel.

(11) PRODUCT FINISHING SECTION consists of equipment used to dry, extrude, pelletize, or otherwise prepare completed resin prior to packaging or storage.

(12) RECYCLE TREATERS consist of equipment which removes water and other impurities in the recycle ethylene stream.

(13) RESIN, as defined by the American Society for Testing Materials (ASTM), is a solid or semi-solid, water-insoluble, organic material with little or no tendency to crystallize and is used as the basic components of plastics and/or as a component of surface-coating formulations.

(14) RESIN MANUFACTURER is a person who reacts organic compounds to produce a resin and is classified as 2821 in the Standard Industrial Classification Manual (Office of Management and Budget, Executive Office of the President).

(15) SLURRY VACUUM FILTER SYSTEM consists of equipment used to separate atactic and isotactic polymer.

(16) STYRENE RECOVERY SYSTEM consists of equipment that separates styrene monomer from reaction by-products.

(17) THINNING TANK is a vessel which receives resin and/or other reaction products from an organic resin reactor and to which solvents may be added.

(18) VACUUM DEVOLATILIZER SYSTEM consists of equipment used in the vacuum separation of polystyrene from styrene monomer and reaction by-products.

(19) VENT is a port or opening that allows gases to discharge to the atmosphere when leaving a reactor or other equipment. Where a product recovery condenser is used, the vent is the point of discharge from the condenser to the atmosphere.

(20) VOLATILE ORGANIC COMPOUND (VOC) is as defined in Rule 102.

(b) Requirements

(1) A resin manufacturer shall not manufacture organic resin unless the total emissions of volatile organic compounds (VOC), from the organic resin reactor, thinning tank and blending tank vents, before being vented to the atmosphere, are reduced:

(A) to 0.5 pound per 1000 pounds of completed resin produced, or

(B) by 95 percent or more.

(2) A resin manufacturer shall not manufacture organic resin by a continuous polystyrene process unless the total emissions of VOC from vacuum devolatilizer system and styrene recovery system, before being vented into the atmosphere, are reduced to 0.12 pound per 1000 pounds of completed resin produced.

(3) A resin manufacturer shall not manufacture organic resin by a liquid-phase high-density polyethylene slurry process unless the total emissions of VOC from the organic resin reactor, recycle treaters, thinning tank, blending tank and product finishing section, before being vented to the atmosphere are reduced by 98 percent or more.

(4) A resin manufacturer shall not manufacture organic resin by a liquid-phase polypropylene process unless the total emissions of VOC from the organic resin reactor, slurry vacuum filter system, diluent recovery section, and product finishing section vents, before being vented to the atmosphere, are reduced by 98 percent or more.

(c) Recordkeeping Requirements

(1) Daily Recordkeeping: A resin manufacturer shall maintain daily records. Such records shall be kept at the facility for at least two years, and shall be made available to the District upon request. The records shall include the following:

(A) the amount and type of each resin produced; and

(B) daily VOC emissions.

(2) Monthly Recordkeeping Option: In lieu of complying with the requirements of paragraph (c)(1), a resin manufacturer may choose to maintain monthly records provided the resin manufacturing equipment or process is not subject to a daily production limit or daily emission limit in any applicable District rules(s) or permit(s). Such records shall be kept at the facility for at least two years, and shall be made available to the District upon request. The records shall include the following:

(A) the amount and type of each resin produced; and

(B) monthly VOC emissions.

(d) Compliance Test Methods

For the purpose of this rule, the following test methods shall be used:

(1) 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.

(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:

(A) For total organics: USEPA Test Methods 25, 25A, or SCAQMD Method 25.1;

(B) For exempt compounds: USEPA Method 18, or ARB Method 422.

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 the rule.

(3) The following classes of compounds will be considered for compliance with subdivision (b), only if the manufacturer specifies which individual compounds are present in the coating formulations or process and identifies the test methods approved by the USEPA and SCAQMD that can be used to quantify the amounts of each exempt compound: 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.

(e) Exemptions

(1) The provisions of subdivision (b) shall not apply to any facility that emits less than a total of ten pounds of volatile organic compounds per day to the atmosphere from all of the equipment subject to this rule.

(2) The provisions of subdivision (b) shall not apply to any facility that emits less than a total of 220 pounds of volatile organic compounds per calendar month to the atmosphere from all of the equipment subject to this rule.

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SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

(Adopted July 19, 1991)

RULE 1142. MARINE TANK VESSEL OPERATIONS

(a) Applicability

This rule shall apply to all loading, lightering, ballasting, and housekeeping events where a marine tank vessel is filled with an organic liquid; or where a liquid is placed into a marine tank vessel's cargo tanks which had previously held organic liquid.

(b) Definitions

1. BACKGROUND is the ambient concentration of volatile organic compounds in the air determined at least one (1) meter upwind of the component being inspected.
2. BALLASTING is the loading of water or other liquid into a marine tank vessel's cargo tank to obtain proper propeller, rudder, and hull immersion.
3. South Coast Waters means the Pacific Ocean area beginning at the intersection of the Pacific Ocean and the Los Angeles-Ventura County boundary; and proceeding southwesterly to the intersection of the boundary of the California Coastal Waters at a point having the coordinates of 33° North Latitude and 119.5^{o} West Longitude; then southeasterly along said boundary of the California Coastal Waters to a point having the coordinates of 32.5^{o} North Latitude and 118.5^{o} West Longitude; and then northeasterly to the intersection of the Pacific Ocean and the Orange-San Diego County boundary.
4. EMISSION CONTROL EQUIPMENT means any equipment, machinery, apparatus, or device used to collect, store, or reduce the emissions of volatile organic compounds in the atmosphere.
5. EXEMPT COMPOUNDS are any of the following compounds that have been determined to be non-precursors of ozone:

   (A) Group I

   chlorodifluoromethane (HCFC-22)

   dichlorotrifluoroethane (HCFC-123)

   tetrafluoroethane (HFC-134a)

   dichlorofluoroethane (HCFC-141b)

   chlorodifluoroethane (HCFC-142b)

   (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)

In the future, the use of Group II compounds may be regulated by the District because they are toxic or potentially toxic, upper atmospheric 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.

6. GASEOUS LEAK means a condition that exists when the reading on a portable hydrocarbon meter, measured 1 centimeter or less from any source, exceeds 1,000 parts per million, expressed as methane, above background.
7. HOUSEKEEPING consists of altering the composition of gases contained within marine vessel tanks by tank washing, gas freeing, or purging.
8. LIQUID LEAK means a leak of more than three drops per minute of organic liquid.
9. LIGHTERING is the transfer of organic liquid into a cargo tank from one marine tank vessel to another.
10. LOADING EVENT means an incident or occurrence beginning with the connecting of marine terminal storage tanks or a marine tank vessel to marine tank vessel cargo tank(s) with pipes or hoses followed by the transfer of liquid cargo and ending with the disconnecting of the pipes or hoses; or any other means of placing liquid into cargo tanks. In addition, emissions resulting from the venting of volatile organic compounds in South Coast Waters prior to, during, or after a loading event are included in that loading event.
11. MARINE TANK VESSEL means any tugboat, tanker, freighter, passenger ship, barge, boat, ship, or watercraft, which is specifically constructed or converted to carry liquid cargo in tanks.
12. MARINE TERMINAL means any facility, equipment, or structure constructed to handle the loading or unloading of organic liquid into or out of marine tank vessels.
13. ORGANIC LIQUID means gasoline, gasoline blending stocks, aviation gas and aviation fuel (JP-4 type), crude oil and other liquids containing volatile organic compounds.
14. VOLATILE ORGANIC COMPOUND means any chemical compound which contains the element carbon, except methane, carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates, ammonium carbonate, and exempt compounds.

(c) Requirements

1. Marine Tank Vessels

(A) Effective January 1, 1992, an owner or operator of a marine tank vessel equipped with emission control equipment shall operate such equipment while conducting a loading, lightering, ballasting, or housekeeping event in South Coast Waters.

(B) Effective January 1, 1994 a loading, lightering, ballasting, or housekeeping event shall not be conducted while in South Coast Waters, unless:

(i) The emissions of volatile organic compounds are limited to 5.7 grams per cubic meter (2 lbs per 1,000 barrels) of liquid loaded into a marine tank vessel; or

(ii) The emissions of volatile organic compounds are reduced by at least 95 percent by weight from uncontrolled conditions.

2. Liquid and Gaseous Leaks

Effective January 1, 1994, all hatches, pressure relief valves, connections, gauging ports and vents, and other equipment associated with a loading, lightering, ballasting, or housekeeping event shall be maintained free of liquid or gaseous leaks. Any liquid or gaseous leak shall be tagged upon detection and repaired within 4 hours of

detection by the owner or operator. Any liquid or gaseous leak detected by District staff shall constitute a violation of this rule.

3. Emission Control Equipment

   The emission control equipment shall be designed and operated to collect, store, and process all emissions of volatile organic compounds resulting from a loading, lightering, ballasting, or housekeeping event.

(d) Compliance Schedule

Any owner or operator of a marine tank vessel or a terminal shall submit to the District Executive Officer an application for a Permit to Construct by April 1, 1992, for any equipment required to comply with the provisions of this rule.

(e) Test Methods

1. Determination of Emissions

   Emissions of volatile organic compounds specified in subparagraph (c)(1)(B) shall be measured according to the Environmental Protection Agency's (EPA) Reference Method 25, Air Resources Board's (ARB) Method 2-4, District's Source Test Manual Method 25.1 (March 1989), or any other test method determined to be equivalent after review by the staffs of the District, the Air Resources Board, and the United States Environmental Protection Agency, and approved in writing by the District Executive Officer. This test shall be conducted for at least 30 minutes during the transfer of the last 50 percent of total liquid cargo. For events of less than one hour duration, the test shall include the entire last 50 percent of total liquid cargo.

2. Determination of Exempt Compounds

   Emissions of exempt compounds shall be measured according to Air Resources Board Method 422 adopted January 22, 1987, or any other test method determined to be equivalent after review by the staffs of the District, the Air Resources Board, and the United States Federal Environmental Protection Agency and approved in writing by the District Executive Officer.

3. Determination of Vapor Processing System Efficiency

   Mass emission rates of vapor processing systems specified in subparagraph (c)(1)(B) shall be determined according to EPA's Reference Method 25, ARB's Method 2-4, District's Source Test Manual Method 25.1 (March 1989) or any other test method determined to be equivalent after review by the staffs of the District, the Air Resources Board, and the United States Environmental Protection Agency, and approved in writing by the District Executive Officer.

4. Determination of Gaseous Leaks

   The screening of equipment for gaseous leaks shall be conducted according to EPA's Reference Method 21 or the procedures in the District's Source Test Manual, or any other test method determined to be equivalent after review by the staffs of the District, the Air Resources Board, and the United States Environmental Protection Agency, and approved in writing by the District Executive Officer.

5. Determination of Compliance

   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.

(f) Safety and Emergency

Nothing in this rule shall be construed as to:

1. Require any act or omission that would be in violation of any regulation or other requirement of the United States Coast Guard; or
2. Prevent any act that is necessary to secure the safety of a vessel or the safety of the passengers or crew.

(g) Notice

Effective January 1, 1992, any owner or operator of a marine tank vessel intending to engage in a loading, lightering, ballasting, or housekeeping event shall notify the District Executive Officer in writing, or by telephone, or in person at least 48 hours prior to the event. Such notice shall include name(s) of marine tank vessel(s), description of operation(s), cargo, location, and estimated start time and duration of the event.

(h) Recordkeeping

Effective January 1, 1994, any owner or operator of a marine tank vessel shall maintain two sets of records regarding each loading, lightering, ballasting, or housekeeping event. One set of records will be kept on board the marine tank vessel and the other set shall be kept at the marine terminal. Records shall be maintained for at least two years and shall be made available to District staff upon request. Such records shall be submitted annually on standard forms specified by the District, and shall contain all information required on the form. The records shall include, but are not limited to, all of the following information:

1. The location of each marine loading, lightering, ballasting, or housekeeping event.
2. The owner or operator responsible for handling the marine loading, lightering, ballasting, or housekeeping event.
3. The date(s) and times at which the marine tank vessel(s) arrived and departed from the location of the loading, lightering, ballasting, or housekeeping event.
4. The name and registry of the vessel and legal owner of the marine tank vessel participating in the loading, lightering, ballasting, or housekeeping event.
5. The prior cargo carried by the receiving marine tank vessel.
6. The type and amount of liquid cargo loaded into the receiving marine tank vessel.
7. The condition of the receiving marine tanks prior to being loaded (i.e., cleaned, crude oil washed, gas freed, etc.).
8. The amount of ballast water or other liquid added to the unsegregated ballast tanks.
9. The description of operating procedures to prevent venting while ballasting into unsegregated ballast tanks.
10. The complete description of any gaseous or liquid leak detected, leak repair action taken, date and time of leak detection, time required to repair leak, and screening level after a repair has been made.

(i) Ozone Episode Days

1. Effective January 1, 1992, a loading, lightering, ballasting or housekeeping event shall not be conducted on any day that the District predicts a Stage 1 or greater ozone episode for any area of the South Coast Air Basin, unless the emissions of volatile organic compounds are reduced by at least 95 percent by weight from uncontrolled conditions, or are limited to 5.7 grams per cubic meter (2 pounds for every 1,000 barrels) of liquid loaded.

   Any marine vessel or terminal operator, who has been subject to the prohibition of paragraph (i)(1) for two consecutive days, may conduct a marine loading, lightering, ballasting, or housekeeping event in South Coast Waters for up to three days following the two consecutive days of prohibition.

CALIFORNIA COASTAL WATERS

California Coastal Waters have been defined as that area between the California Coastline and a line starting at the California-Oregon border at the Pacific Ocean

thence to 42.0°N 125.5°W

thence to 41.0°N 125.5°W

thence to 40.0°N 125.5°W

thence to 39.0°N 125.0°W

thence to 38.0°N 124.5°W

thence to 37.0°N 123.5°W

thence to 36.0°N 122.5°W

thence to 35.0°N 121.5°W

thence to 34.0°N 120.5°W

thence to 33.0°N 119.5°W

thence to 32.5°N 118.5°W

and ending at the California-Mexico border at the Pacific Ocean.

Boundary of California Coastal Waters

NOTE: Coordinates shown

above are exact. Distances

of California Coastal Waters

boundary from coast are rough

approximations.

Source: Air Resources Board staff.

68 mi 102 mi 27 56 mi

58 mi 79 mi mi

82 mi 35 mi 90 mi

(Adopted March 6, 2009) (Amended June 4, 2010)(Amended July 9, 2010)
(Amended December 3, 2010)

RULE 1143. CONSUMER PAINT THINNERS & MULTI-PURPOSE SOLVENTS

(a) Purpose

The purpose of this rule is to reduce emissions of volatile organic compounds (VOCs) from the use, storage and disposal of consumer paint thinners and multi-purpose solvents commonly used in thinning of coating materials, cleaning of coating application equipment, and other solvent cleaning operations by limiting their VOC content.

(b) Applicability

This rule is applicable to any person who supplies, sells, offers for sale, or manufactures consumer paint thinners and multi-purpose solvents for sale in the District, as well as any person who uses or solicits the use of any consumer paint thinner and multi-purpose solvent within the District.

(c) Definitions

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

(1) ARTIST SOLVENTS/THINNERS are any liquid products that meet and are labeled to meet the requirements of ASTM D4236-94 (Reapproved 2005) Standard Practice for Labeling Art Materials for Chronic Health Hazards, which is incorporated by reference herein, and have been refined to remove impurities for artistic use for the purpose of reducing the viscosity of, or removing, art coating compositions or components. Artist Solvents/Thinners do not include commercial-grade solvents or thinners.

(2) CONSUMER MULTI-PURPOSE SOLVENTS are any liquid products designed or labeled to be used for dispersing or dissolving or removing contaminants or other organic materials for personal, family, household, or institutional use including but not limited to the following: (1) products that do not display specific use instructions on the product container or packaging, (2) products that do not specify an end-use function or application on the product container or packaging, (3) solvents used in institutional facilities, except for laboratory reagents used in analytical, educational, research, scientific or other laboratories, (4) “Paint clean-up”

products, and (5) products labeled to prepare surfaces for painting. For the purpose of this definition only, "Paint clean-up" means any liquid product labeled for cleaning oil-based or water-based paint, lacquer, varnish, or related coatings from, but not limited to, painting equipment or tools, plastics or metals.

"Consumer Multi-purpose Solvents" do not include solvents used in cold cleaners, vapor degreasers, conveyorized degreasers or film cleaning machines, or solvents that are incorporated into, or used exclusively in the manufacture or construction of, the goods or commodities at the site of the establishment. "Multi-purpose Solvents" also do not include any products making any representation that the product may be used as, or is suitable for use as a consumer product which qualifies under another definition in California Code of Regulations Title 17, § 94508 as of the date of adoption.

(3) CONSUMER PAINT THINNERS are any liquid products used for reducing the viscosity of coating compositions or components for personal, family, household, or institutional use, including, but not limited to, products that prominently display the term "Paint Thinner," "Lacquer Thinner," "Thinner," or "Reducer" on the front panel of its packaging.

(4) DISTRIBUTOR means any person to whom consumer products are sold or supplied for the purposes of resale or distribution in commerce, except that manufacturers, retailers, and consumers are not distributors.

(5) EXEMPT COMPOUND is as defined in Rule 102.

(6) FORMULATION DATA is the actual product recipe which itemizes all the ingredients contained in a product including VOCs and the quantities thereof used by the manufacturer to create the product. Material Safety Data Sheets (MSDS) are not considered formulation data.

(7) 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 the material in liters

(8) INDUSTRIAL MAINTENANCE COATINGS are coatings, including primers, sealers, undercoaters, intermediate coatings and topcoats, formulated for or applied to substrates, including floors that are exposed to one or more of the following extreme environmental conditions:

(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 similar chemicals, chemical fumes, chemical mixtures, or solutions;

(C) repeated exposure to temperatures in excess of 250 degrees Fahrenheit;

(D) repeated heavy abrasion, including mechanical wear and repeated scrubbing with industrial solvents, cleaners, or scouring agents; or

(E) exterior exposure of metal structures.

(9) LACQUER THINNERS are solvents that are manufactured for the purpose of thinning, diluting, dissolving, and for clean-up of lacquer coatings.

(10) MANUFACTURER means any person, company, firm, or establishment who imports, manufactures, blends, assembles, produces, packages, repackages, or re-labels a consumer paint thinner or multi-purpose solvent. The manufacturers listed on the product's label shall be primarily responsible for compliance with applicable provisions of this rule. If the label lists two or more manufacturers, they may mutually designate in writing a manufacturer responsible for compliance with this rule. That writing shall be filed with the Executive Officer.

(11) PERSON means 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.

(12) RESPONSIBLE PARTY for a corporation is a corporate officer or an authorized representative so delegated by a corporate officer. Delegation of an authorized representative must be made in writing to the Executive Officer. A responsible party for a partnership or sole proprietorship is the general partner or proprietor, respectively.

(13) RETAIL OUTLET means any establishment at which consumer products are sold, supplied, or offered for sale directly to consumers.

(14) SOLICIT is to require for use or to specify, by written or oral contract.

(15) SOLVENTS include diluents and thinners and are defined as organic materials which are liquids at standard conditions and which are used as dissolvers, viscosity reducers or cleaning agents.

(16) SOLVENT CLEANING is the removal of adhesives, inks, coatings, and contaminants which include, but are not limited to, dirt, soil, and grease from parts, products, tools, machinery, equipment, and general work areas.

(17) SOLVENT FLUSHING is the use of a solvent to remove adhesives, inks, coatings, or contaminants from the internal surfaces and passages of the equipment by inducing a rapid flow of solvent through the equipment.

(18) VOC (VOLATILE ORGANIC COMPOUND) is as defined in Rule 102.

(19) VOC CONTENT means the total weight of VOC in a product expressed as a percentage of the product weight or as a mass-based concentration expressed in grams per liter of material (g/L) or pounds per gallon (lb/Gal).

(d) Requirements

(1) Except as provided in paragraph (d)(2), no person shall supply, sell, offer for sale, manufacture, blend, package or repackage any consumer paint thinner or multi-purpose solvent for use in the District unless the consumer paint thinner or multi-purpose solvent complies with the applicable VOC content limits set forth in the table below:

CATEGORY	EFFECTIVE 1/1/2010 VOC Content g/L or (lb/Gal)	EFFECTIVE 1/1/2011 VOC Content g/L or (lb/Gal)
Consumer Paint Thinner	300 (2.50)	25 (0.21)
Consumer Multi-Purpose Solvent	300 (2.50)	25 (0.21)

(2) Sell-Through Provision

(A) Any consumer paint thinner or multi-purpose solvent that is manufactured prior to the effective date of the applicable limit specified in paragraph (d)(1), and that has a VOC content above that limit (but not above the limit in effect on the date of manufacture), may be sold, supplied, offered for sale, or used for up to one year after the specified effective date.

(B) Consumer paint thinners manufactured prior to July 9, 2010 and labeled for more than one use including industrial maintenance coating thinning, may be sold, supplied, offered for sale, or used up to April 1, 2011.

(3) The prohibition of sale specified in paragraphs (d)(1) and (d)(5) shall not apply to any manufacturer of consumer paint thinners or multi-purpose-solvents provided that the product was sold to an independent distributor that was informed in writing by the manufacturer about the compliance status of the product in the District.

(4) Any solvent container in which the contents therein are applied directly to a surface from said container by pouring, siphoning, brushing, rolling, padding, rag application or other means, shall be closed when not in use. These solvent containers include, but shall not be limited to: drums, buckets, cans, pails, trays or other application containers.

(5) General Prohibition

No person shall supply, sell, offer for sale, manufacture, blend, package, or repackage any consumer paint thinner or multi-purpose solvent for use in the District subject to the provisions of this rule with any materials that contain in the excess of 0.1% by weight any Group II exempt compounds listed in Rule 102. Cyclic, branched, or linear, completely methylated siloxanes (VMS) are not subject to this prohibition.

(e) Administrative Requirements

(1) No person shall sell, supply, offer for sale, manufacture, blend, package, or repackage for use in the District any "Flammable" or "Extremely Flammable" Consumer Paint Thinner or Multi-purpose Solvent named, on the Principal Display Panel as "Paint Thinner", "Multi-purpose Solvent", "Clean-up Solvent", or "Paint Clean-up".

(2) Paragraph (e)(1) does not apply to products that meet any of the following criteria:

(A) Products which include an attached "hang tag" or sticker that displays, at a minimum, the following statement: "Formulated to meet low VOC limits: see warnings on label".

(B) Products which include an attached "hang tag" or sticker that displays, at a minimum, the following statement: "Formulated to meet low VOC limits with [the common name of the chemical compound (e.g., 'Acetone', 'Methyl Acetate', etc.) that results in the product meeting the criteria for 'Flammable' or 'Extremely Flammable']".

(C) Products which include an attached "hang tag" as a second Principal Display Panel that displays, at a minimum, the following statement: "Formulated to meet low VOC limits" placed adjacent to and associated with the required Consumer Product Safety Commission (CPSC) warning.

(D) Products where the Principal Display Panel displays, in a font size as large as, or larger than, the largest font size of any other words on the panel, the following statement: "Formulated to meet low VOC limits" placed adjacent to and associated with the required CPSC warning.

(E) Products where the Principal Display Panel displays, in a font size as large as, or larger than, the largest font size of any other words on the panel, the common name of the chemical compound (e.g., "Acetone," "Methyl Acetate," etc.) that results in the product meeting the criteria for "Flammable" or "Extremely Flammable."

(F) Products that meet the labeling requirements of the CARB Consumer Product Regulation specified in title 17, CCR, section 94512(e) as adopted.

(G) Products that are manufactured on or before July 9, 2010.

None of the above labeling or notice requirements preclude the use of any additional labeling or notice for consumer education.

(3) For the purposes of paragraphs (e)(1) and (e)(2) a product is "Flammable" or "Extremely Flammable" if it is labeled as "Flammable" or "Extremely Flammable" on the product container, or if the product meets the criteria for these specified in title 16, Code of Federal Regulations, section 1500.3 (c)(6).

(4) Each product container shall clearly display the VOC content as determined from the actual product formulation data.

(5) The information required by paragraphs (e)(1) through (e)(3) shall be displayed on the product container such that it is readily observable without removing or disassembling any portion of the product container or packaging.

(6) No person shall remove, alter, conceal, or deface the information required by paragraphs (e)(1) through (e)(3) prior to final sale of the product.

(7) In conjunction with the changes in VOC content limits, the Executive Officer shall develop a public education and outreach program to inform consumers of potential product changes that use more flammable substances by jointly working with the local fire departments to include, but not be limited to: public service announcements in both English and Spanish to be aired on television and radio from October 2010 to January 2012; training retailers, including big box retailers at their corporate headquarters, in November 2010 about these potential changes so that they may alert their consumers; dissemination of 25,000 hardcopy brochures in several languages from November 2010 to January 2012; alerts through Twitter, and placement of electronic brochures and Public Service Announcements (PSAs) on AQMD, CARB, YouTube, local fire department and local city websites from November 2010 to January 2012. The Executive Officer shall report the status of the public education and outreach program to the Stationary Source Committee in November 2010 and in November 2011. The Executive Officer may extend the public education and outreach program beyond January 2012, if he determines that additional consumer education is needed.

(8) Point of sale containers, for sale or distribution, of any consumer paint thinner or multi-purpose solvent subject to this rule shall display the

maximum VOC content, as supplied, and the maximum VOC content after any dilution as recommended by the manufacturer.

(9) Point of sale containers, for sale or distribution, of any consumer paint thinner and multi-purpose solvent subject to this rule shall display the date of manufacture of the contents or a code indicating the date of manufacture. The manufacturers of such consumer paint thinners and multi-purpose solvents shall file with the Executive Officer an explanation of each code.

(10) Any manufacturer that supplies consumer paint thinners and multi-purpose solvents with intent to sell in the District shall submit an application as specified by the Executive Officer to apply for a manufacturer identification (ID) number by the applicable date in subdivision (g). The application form shall be signed by the responsible party for manufacturer certifying that all information submitted (including electronic submittals) is true and correct. The Executive Officer shall be notified in writing within 30 days of any change in the responsible party for the manufacturer.

(11) On or before May 1, 2010, and each subsequent January 1 thereafter, all manufacturers subject to this rule shall provide to the District a list of all their U.S. distributors to whom they supply products subject to this rule, including but not limited to private label and toll manufactured products. The list shall be in a format determined by the Executive Officer and shall include the distributor's name, address, contact person and phone number.

(12) On or before April 1, 2010, and every subsequent April 1 (the official due date), each manufacturer subject to this rule shall submit an annual quantity and emissions report to the Executive Officer.

(f) Recordkeeping

(1) Manufacturers shall maintain a copy of the application receipt from the District. The receipt shall be maintained for five (5) years and made available upon request by the Executive Officer.

(2) Manufacturers shall maintain records to verify data necessary to determine annual consumer paint thinner and multi-purpose solvent sales subject to this rule and VOC emissions in the District, and compliance with applicable rules and regulations. The records shall be maintained for five

(5) years and made available upon request by the Executive Officer. Such records shall include but not be limited to:

(A) Product formulation records (to include VOC content):

(i) Laboratory reports [including percent weight of non-volatiles, water, and exempts (if applicable); density of the product; and raw laboratory data] of test methods conducted as specified in paragraph (i)(1), or

(ii) Product formulation data, including physical properties analyses, as applicable, with a VOC content calculation demonstration; and

(B) Production records including batch tickets with the date of manufacture, batch weight and volume; and

(C) Distribution records:

(i) Customer lists or store distribution lists or both (as applicable) and

(ii) Shipping manifests or bills of lading or both (as applicable); and

(D) Sales records consisting of point of sale receipts or invoices to local distributors or both, as applicable.

(g) Compliance Dates

(1) Consumer paint thinner and multi-purpose solvent manufacturers that begin to manufacture, supply, sell or offer for sale consumer paint thinners and multi-purpose solvents subject to this rule and for use in the District after July 1, 2009 shall submit the application required in paragraph (e)(10) no later than thirty (30) calendar days prior to manufacturing, supplying, selling, or offering for sale, any consumer paint thinner and multi-purpose solvent subject to this rule and for use in the District.

(2) Within thirty (30) calendar days after a change of consumer paint thinner and multi-purpose solvent manufacturer, the new consumer paint thinner and multi-purpose solvent manufacturer shall submit the application for a company ID number as required in paragraph (e)(10). That filing shall include the previous consumer paint thinner and multi-purpose solvent manufacturer's ID number.

(h) Information exempt from Disclosure

Information submitted to the Executive Officer may be designated as exempt from disclosure consistent with District guidelines implementing the California Public Records Act (Govt. Code §§ 6250-6276.48).

(i) Test Methods

For the purpose of this rule, the following test methods shall be used:

(1) Determination of VOC Content

The VOC content of materials subject to the provisions of this rule shall be determined by:

(A) U.S. EPA Reference Test 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) with the exempt compound content determined by Method 303 (Determination of Exempt Compounds) in the SCAQMD "Laboratory Methods of Analysis for Enforcement Samples" manual; or

(B) Method 304 [Determination of Volatile Organic Compounds (VOC) in Various Materials] 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 subdivision (d), only when manufacturers specify which individual compounds are used in the solvent formulations. In addition, the manufacturers must identify the U.S. EPA, CARB, and SCAQMD approved test methods, which can be used to quantify the amount of each exempt compound.

(2) Equivalent Test Methods

Other test methods determined to be equivalent upon approval in writing by the Executive Officer, CARB, and the U.S. EPA may also be used.

(3) 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.

(4) All test methods referenced in this subdivision shall be the version most recently approved by the appropriate governmental entities.

(j) Exemptions

(1) The provisions of this rule shall not apply to:

(A) Solvents sold in this District for shipment outside of this District or for shipment to other manufacturers for repackaging.

(2) Paragraph (d)(1) of this rule shall not apply to:

(A) Solvents provided that they are labeled and designated exclusively for the clean-up of polyaspartic and polyurea coatings application equipment. This exemption does not apply if there are any additional use claims on the label or any other product literature. This exemption does not apply to any person selling or using the otherwise exempt solvent for a non-exempt purpose.

(B) Thinners provided that they are labeled and designated exclusively for the thinning of Industrial Maintenance (IM) coatings, Zinc-Rich IM Primers, and High Temperature IM Coatings. This exemption does not apply if there are any additional use claims on the label or any other product literature. This exemption does not apply to any person selling or using the otherwise exempt thinner for a non-exempt purpose.

(C) Artist solvents/thinners provided that they are labeled and designated exclusively to reduce the viscosity of, or remove, art coating compositions or components and are individually packaged in containers having a total capacity equal to or less than 1 liter.

(k) Severability

If any provision of this rule is held by judicial order to be invalid, or invalid or inapplicable to any person or circumstance, such order shall not affect the validity of the remainder of this rule, or the validity or applicability of such provision to other persons or circumstances. In the event any of the exceptions to this rule is held by judicial order to be invalid, the persons or circumstances covered by the exception shall instead be required to comply with the remainder of this rule.

(Adopted March 6, 2009)(Amended July 9, 2010)

RULE 1144 METALWORKING FLUIDS AND DIRECT-CONTACT LUBRICANTS

(a) Purpose

The purpose of Rule 1144 is to reduce volatile organic compound (VOC) emissions from the use of metalworking fluids and direct-contact lubricants at industrial facilities.

(b) Applicability

The rule applies to all persons who use metalworking fluids and direct-contact lubricants on products and parts during manufacture and assembly; and all manufacturers and suppliers who supply, sell, or offer for sale metalworking fluids and direct-contact lubricants for use at industrial facilities. This rule shall apply to all VOC containing fluids used for metalworking including metal removal, metal forming, metal treating or lubricating operations where the metalworking fluid or direct-contact lubricant comes into direct contact with products and parts including, but not limited to, blanking, broaching, coining, cutting, drilling, drawing, forming, forging, grinding, heading, honing, lapping, marquenching, milling, piercing, quenching, roll forming, rolling, stamping, tapping, threading, turning and wire drawing. The rule also applies to VOC containing fluids used for metal protection, including rust and corrosion prevention and inhibition, during the manufacture and assembly of products and parts. The provisions of this rule shall not apply to repair, maintenance or research operations.

(c) Definitions

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

(1) ASSEMBLED AIRCRAFT is any machine that is a complete vehicle, assembly of parts at an aircraft assembly facility or major partial section including wheel wells, fuselage sections, pressure decks, wings, blades or cockpit, designed to travel through the air, without leaving the earth's atmosphere, including airplanes, balloons, dirigibles, helicopters and missiles.

(2) DIRECT-CONTACT LUBRICANT is a fluid that comes into direct contact with the product or part during manufacturing or assembly and is used to reduce friction and to prolong the life of machine tools and

machinery. A direct-contact lubricant is not a metal forming fluid and is not a metal removal fluid.

(3) EXEMPT COMPOUND is as defined in Rule 102.

(4) 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 =

$$\frac{W_s - W_w - W_{es}}{V_m}$$

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

(5) LAPPING is a manufacturing method that employs particles of an abrasive material, suspended in a liquid carrier, between rotating plates.

(6) MANUFACTURING is the use of tools and labor to make things for sale.

(7) METAL FORMING FLUID is a fluid used at the tool and workpiece interface to facilitate the flow of metal over the tool and to extend the life of the tool. Common metal forming operations include, but are not limited to, blanking, coining, drawing, forming, forging, heading, piercing, roll forming, stamping and wire drawing.

(8) METAL PROTECTING FLUID is fluid that inhibits or prevents the corrosion of metal surfaces. It is applied independently of any other metalworking, lubricating or cleaning application.

(9) METAL REMOVAL FLUID is a fluid used at the tool and workpiece interface to facilitate the removal of metal from the part, cool the part and tool, extend the life of the tool, and to flush away chips and debris. Common metal removal operations include, but are not limited to, broaching, cutting, drilling, grinding, honing, lapping, milling, tapping, threading and turning.

(10) METAL TREATING FLUID is a fluid used to remove heat from metal parts, affect their hardness, and/or change the grain structure of the metal. Common metal treating operations include, but are not limited to, marquenching and quenching.

(11) METALWORKING FLUID is a fluid that facilitates operations involving the working, protecting or modification of metals, including metal

forming, protecting, treating and removal, and may consist of straight oils, emulsifiable oils and synthetic and semi-synthetic fluids.

(12) MILITARY SPECIFIED PRESERVATIVE is a preventative or protecting fluid qualified under military specification and used in a military application.

(13) PRECISION METAL REMOVAL FLUID is a fluid used for carbide grinding machine tools, where the manufacturer of the machine tool specifies the viscosity of the fluid, or for machining of aluminum or magnesium in single or multiple spindle automatic machines.

(14) SINKER ELECTRICAL DISCHARGE MACHINING (EDM) is a method of removing material by a series of rapid recurring electric arcing discharges between an electrode and the workpiece, in the presence of an energetic electric field, in an insulating oil.

(15) SPACE VEHICLE is a vehicle designed to travel beyond the earth's atmosphere.

(16) SOLICIT is to require for use or to specify, by written or oral contract.

(17) SUPER COMPLIANT MATERIAL is any material containing 50 grams or less of VOC per liter of material.

(18) VANISHING OIL is a direct-contact lubricant or metalworking fluid with a flash point less than 200°F (93°C).

(19) VOLATILE ORGANIC COMPOUND (VOC) is as defined in Rule 102.

(d) Requirements

(1) VOC Content

A person shall not use or solicit the use of any metalworking fluid or direct-contact lubricant that has a VOC content in excess of the limits contained in Table A of this paragraph:

Table A – Fluid Categories and VOC Limits

FLUID	EFFECTIVE 1/1/2010 VOC g/l (lb/gal)	EFFECTIVE 1/1/2011 VOC g/l (lb/gal)	EFFECTIVE 1/1/2012 VOC g/l (lb/gal)
(A) Vanishing Oil	50 (0.42)		
(B) Metalworking Fluid			
(i) Metal Forming			75 (0.63)
(ii) Metal Removal			
(a) General			75 (0.63)
(b) Precision Metal Removal			130 (1.08)
(iii) Metal Treating			75 (0.63)
(iv) Metal Protecting			
(a) General	300 (2.50)		50 (0.42)
(b) Military Specified Preservative		340 (2.83)	
(C) Direct-Contact Lubricant			50 (0.42)

(2) Prohibition of Sale

(A) No person shall manufacture for use, offer for sale, sell or distribute directly to a person any metalworking fluid or direct-contact lubricant for use in the District which, at the time of sale or manufacture, contains more VOC per liter of material after recommended dilution, and after the effective date, as listed in Table A.

(B) The prohibition of sale shall not apply to any manufacturer or supplier of metalworking fluid or direct-contact lubricant provided the product was sold to an independent distributor that was informed in writing by the manufacturer or supplier that the

metalworking fluid or direct-contact lubricant is not to be used in the South Coast Air Quality Management District.

(C) The prohibition of sale shall not apply to any manufacturer or supplier of metalworking fluid or direct-contact lubricant collected and directed to an emission control system pursuant to subdivision (e).

(3) Sell-Through Provision

Any metalworking fluid or direct-contact lubricant that is manufactured prior to the effective date of the applicable limit, and that has a VOC content above that limit (but not above the limit in effect on the date of manufacture), may be sold, supplied, offered for sale, or applied for up to six months after the specified effective date.

(e) Control Equipment

A person may use metalworking fluids and direct-contact lubricants in excess of the limits provided all metalworking fluids and direct-contact lubricants are controlled by an emission control system that meets the following:

(1) The control device reduces VOC emissions from an emission collection system by at least 95 percent by weight or the output of the air pollution control device is no more than 5 PPM VOC by volume calculated as carbon with no dilution; and

(2) The emission collection system has been demonstrated to collect at least 90 percent by weight of the VOC emissions generated by the sources of VOC emission.

(f) Administrative Requirements

(1) Effective January 1, 2010, containers, for sale or distribution, of any vanishing oil or metal protecting fluid subject to this rule shall display the date of manufacture of the contents or a code indicating the date of manufacture. The manufacturers of such vanishing oils or metal protecting fluids shall file with the Executive Officer of the District an explanation of each code.

(2) Effective January 1, 2012, containers for sale or distribution, of any metalworking fluid or direct-contact lubricant subject to this rule shall display the VOC content and either the date of manufacture of the contents or a code indicating the date of manufacture. The manufacturer or

supplier of such fluids shall file with the Executive Officer of the District an explanation of each date code.

(3) For each calendar year (January 1 through December 31) beginning with 2011 and continuing with each subsequent calendar year until 2013, a metalworking fluid or direct-contact lubricant manufacturer or supplier shall submit to the District by April 1 of the following calendar year, an annual quantity and emissions report for products subject to the rule sold within the District. The report format shall be approved by the Executive Officer, and shall include the annual sales volume and VOC content of metalworking fluids and direct-contact lubricants sold or distributed within the District.

(g) Recordkeeping Requirements

(1) An owner or operator shall develop and maintain a VOC listing of all metalworking fluids and direct-contact lubricants purchased for use at the facility. The list shall be kept in a format specified by the District or in an equivalent format and shall contain the following data:

(A) Name and AQMD facility identification number (if applicable) of the stationary source;

(B) For each metalworking fluid and direct-contact lubricants:

(i) Manufacturer, a manufacturer product number, ID, or code that uniquely identifies the VOC-containing fluid, and a fluid category;

(ii) Grams of VOC per liter of material;

The VOC Listing shall be updated within seven (7) calendar days from the date of receipt of a new metalworking fluid or direct-contact lubricant at the facility.

(2) An owner or operator shall record the following information on a monthly usage log in a format specified by the District or in an equivalent format:

(A) Name and AQMD identification number of the facility;

(B) Manufacturer product number, ID, or code from the VOC Listing;

(C) Amount of each VOC-containing fluid purchased on a monthly basis;

(D) Initials of the person entering the data; and

(E) Date the data was entered.

(3) An owner or operator of a stationary source shall maintain and make available to a District representative upon request all of the information necessary to verify the amount of metalworking fluids and direct-contact lubricants used at the facility including, but not limited to purchase records identifying the supplier's name, date, and amount purchased.

(4) In lieu of meeting paragraphs (g)(1), (g)(2) and (g)(3), records may be maintained pursuant to Rule 109 for all applications subject to this rule.

(5) 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.

(6) Manufacturers utilizing the provision of subparagraph (d)(2)(B) shall maintain notification letters for five (5) years, which shall be made available to the Executive Officer or designee upon request.

(7) Manufactures or suppliers of metalworking fluids and direct-contact lubricants shall maintain records to verify data used to determine VOC content in preparing their annual quantity and emissions report. The records shall be maintained for five (5) years and made available upon request by the Executive Officer. Such records shall include:

(A) Laboratory reports; or

(B) VOC content calculations.

(h) Test Methods and Procedures

The following test methods and procedures shall be used to determine compliance with this rule. Other applicable test methods may be used if they are determined to be equivalent and approved in writing by the Executive Officer, the California Air Resources Board and the U.S. Environmental Protection Agency.

(1) Determination of VOC Content

(A) ASTM E 1868 - 10 Standard Test Method for Loss-On-Drying by Thermogravimetry. Quality assurance and quality control procedures shall be conducted using SCAQMD Additional Requirements to ASTM Standard Test Method E 1868-10 for Metalworking Fluids and Direct-Contact Lubricants. Water content shall be determined by ASTM D 4017 (Standard Test Method for Water in Paints and Paint Materials by Karl Fischer Method) if applicable to the specific sample. 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) 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 (d), only when manufacturers specify which individual compounds are used in the coating formulation. In addition, the manufacturers must identify the USEPA, CARB, and the SCAQMD approved test methods used to quantify the amount of each exempt compound.

(2) Determination of Flash Point

ASTM D93 - 07 Standard Test Methods for Flash Point by Pensky-Martens Closed Cup Tester.

(3) Determination of Efficiency of Emission Control System

(A) The capture efficiency of an emission control system shall be determined by verifying the use of a Permanent Total Enclosure (PTE) and 100% capture efficiency as defined by U.S. EPA Method 204 “Criteria for and Verification of a Permanent or Temporary Total Enclosure.” Alternatively, if a U.S. EPA Method 204 defined PTE is not employed, capture efficiency shall be determined using a minimum of three sampling runs subject to data quality criteria presented in U.S. EPA technical guidance document “Guidelines for Determination Capture Efficiency, January 9, 1995.” Individual capture efficiency test runs subject to the U.S. EPA technical guidelines shall be determined by:

(i) The Temporary Total Enclosure (TTE) approach of U.S. EPA Method 204 through 204F; or

(ii) The SCAQMD "Protocol for Determination of Volatile organic Compounds (VOCs) Capture efficiency."

(B) 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 U.S. EPA's Test Method 18, or Air Resources Board (ARB) Method 422 for the determination of emissions of Exempt Compounds and U.S. EPA's Test Methods 25, 25A, SCAQMD Method 25.1 for the determination of Total Gaseous Non-Methane Organic Emissions as Carbon, or SCAQMD Method 25.3 for the determination of Low Concentration Non-Methane Non-Ethane Organic Compound Emissions from Clean Fueled Combustion Sources, as applicable.

(C) The overall efficiency of an emission control system shall be determined using the following equation:

Overall Efficiency

= (Capture Efficiency) x (Control Equipment Efficiency)/100

(i) Exemptions

(1) Paragraph (d)(2) and subdivision (f) shall not apply to metalworking fluids and direct-contact lubricants subject to the California Air Resources Board consumer products regulation found in Title 17 of the California Code of Regulations, beginning at Section 94507.

(2) Until January 1, 2011, paragraph (d)(1) shall not apply to metalworking fluids and direct-contact lubricants subject to the California Air Resources Board consumer products regulation found in Title 17 of the California Code of Regulations, beginning at Section 94507.

(3) The provisions of this rule shall not apply to metalworking fluids and direct-contact lubricants sold in this District for shipment outside of this District or for shipment to other manufacturers for repackaging.

(4) The provisions of subdivisions (d) and (f) of this rule shall not apply to metalworking fluids and direct-contact lubricants subject to VOC limits in other Regulation XI rules.

(5) The provisions of subdivision (d) shall not apply to the following operations:

(A) Lapping;

(B) Sinker EDM;

(C) Avionics and assembled aircraft;

(D) Space vehicle components;

(E) Fluids utilizing the control device option in subdivision (e);

(F) Until January 1, 2011, metal protecting fluids used in association with a military specification, military standard, Department of Defense document or Production Part Approval Process (PPAP). The specifications for the part shall be made available to the Executive Officer upon request.

(6) The provisions of subdivision (g) shall not apply to any Super Compliant Material(s). This exemption shall only apply to facilities that demonstrate that total permitted and non-permitted facility VOC emissions do not exceed 4 tons in any calendar year, including emissions from the Super Compliant Material, as shown by annual purchase records.

(7) Paragraphs (d)(1) and (d)(2) shall not apply to the use of dimethyl carbonate used as a cooling solvent in computed numerically controlled (CNC) machines where permeable media are used to maintain a vacuum that holds the part in place during cutting provided that the equipment existed at the time of rule adoption, is enclosed and an exhaust fan discharges the exhaust air from the equipment outside of the building.

(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) (Amended March 8, 1996)(Amended February 14, 1997)
(Amended December 3, 2004)(Amended December 4, 2009)

RULE 1145. PLASTIC, RUBBER, LEATHER, AND GLASS COATINGS

(a) Purpose and Applicability

The purpose of Rule 1145 is to reduce volatile organic compounds (VOC) emissions from the application of coatings to any plastic, rubber, leather, or glass products.

(b) Definitions

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

(1) AEROSOL COATING PRODUCT is 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.

(2) AIR BRUSH OPERATIONS are conducted with a type of coating application equipment that operates at air pressures between 25 psi and 116 psi and an air volume of 0.7 cfm and 1.75 cfm respectively. These operations apply a very thin film of coating to a substrate from a paint reservoir of eight ounces or less.

(3) CLEAR COATING is a colorless coating which contains binders, but no pigment, and is formulated to form a transparent film.

(4) COATING means a layer of material applied on a substrate that forms a decorative and/or protective film.

(5) 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.

(6) 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.

(7) ELECTRIC DISSIPATING COATING is a coating that rapidly dissipates a high-voltage electric charge.

(8) ELECTROSTATIC APPLICATION is a method of applying coating whereby atomized paint droplets are charged and subsequently deposited on the substrate by electrostatic attraction.

(9) EXTREME PERFORMANCE COATING is a coating applied to plastic, rubber, leather, or glass 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 solutions; or, (B) Repeated exposure to temperatures in excess of 250°F; or, (C) Repeated heavy abrasion including mechanical wear and repeated scrubbings with industrial grade solvents, cleaners or scouring agents.

(10) EMI/RFI SHIELDING is a coating used on electrical or electronic equipment to provide shielding against electromagnetic interference, radio frequency interference, or static discharge.

(11) EXEMPT COMPOUNDS (See Rule 102-Definition of Terms).

(12) 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.

(13) 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:

$$\text{Grams of VOC per Liter of Coating, Less Water and Less Exempt Compounds} = \frac{Ws - Ww - Wes}{Vm - Vw - Ves}$$

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

(14) GRAMS OF VOC PER LITER OF MATERIAL is the weight of VOC per volume of material and can be calculated by the following equation:

$$\text{Grams of VOC per Liter of Material} = \frac{Ws - Ww - Wes}{Vm}$$

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

(15) 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.

(16) HIGH-VOLUME, LOW-PRESSURE (HVLP) SPRAY is a coating application system which is operated at air pressures between 0.1 and 10 pounds per square inch gauge (psig) measured dynamically at the center of the air cap and at the air horns.

(17) HIGHWAY CONES are cones used to regulate traffic.

(18) INK is a fluid that contains dyes and/or colorants, and is used to make markings but not to protect surfaces.

(19) LEATHER ANTIQUE COATING is a coating applied to a leather substrate over a leather sealer coating and before a leather top coating to create an antique leather appearance.

(20) LEATHER COLOR COATING is a coating applied to a leather substrate over a leather sealer coating and before a leather top coating to provide color to the leather substrate.

(21) LEATHER SEALER COATING is a coating applied directly to a leather substrate to seal the porous leather substrate.

(22) LEATHER STAIN COATING is an opaque or semi-transparent coating which is formulated to change the color but not to conceal the grain pattern or texture of the leather substrate. Leather stain coatings may be applied as a single coating to the leather substrate or followed by a leather top coating.

(23) LEATHER TOP COATING is a two-component clear coating that is applied to a leather substrate following the application of a leather sealer, leather stain or antique or color coatings.

(24) MASK COATING is thin film coating applied through a template to coat a small portion of a substrate.

(25) METALLIC COATING is a coating which contains more than 5 grams of metal particles per liter of coating as applied.

(26) METAL PARTICLES are pieces of a pure elemental metal or a combination of elemental metals.

(27) MILITARY SPECIFICATION COATING is a coating which has a formulation approved by the United States Military Agency for use on military equipment.

(28) MIRROR BACKING is the coating applied over the silvered surface of a mirror.

(29) 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.

(30) 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.

(31) MULTI-COLOR 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.

(32) ONE-COMPONENT COATING is a coating that is ready for application as it comes out of its container to form an acceptable dry film. A thinner necessary to reduce the viscosity is not considered a component.

(33) OPTICAL COATING is a coating applied to an optical lens.

(34) REFRIGERATED GLASS DOOR COATING is a two-component coating or ink used for the manufacturing of refrigerated glass doors that forms a decorative or protective film and provides a substrate for bonding materials such as seals, spacers, and sealants.

(35) 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.

(36) 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.

(37) 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.

(38) STENCIL COATING is an ink or a pigmented coating which is rolled or brushed onto a template or stamp in order to add identifying letters, symbols and/or numbers.

(39) TOUCH-UP COATING is a coating used to cover minor imperfections appearing after the main coating operation.

(40) 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.

(41) TRANSLUCENT COATING is a coating which contains binders and pigment, and is formulated to form a color, but not opaque, film.

(42) 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.

(43) VACUUM METALIZING/PHYSICAL VAPOR DEPOSITION (PVD) is the process whereby metal is vaporized and deposited on a substrate in a vacuum chamber.

(44) VOLATILE ORGANIC COMPOUND (VOC) is as defined in Rule 102.

(c) Requirements

(1) No person shall apply on plastics, rubber, leather, or glass any coatings which are applied with a VOC content in excess of the limits listed in the Table of Standards.

TABLE OF STANDARDS

VOC LIMITS LESS WATER AND LESS EXEMPT COMPOUNDS		
COATING CATEGORIES	g/L	lbs/gal
Electrical dissipating and shock free coatings	360	3.0
Extreme performance two-component coatings	420	3.5
General one-component coatings	120	1.0
General two-component coatings	120	1.0
Leather antique coatings	156	1.3
Leather color coatings	60	0.5
Leather sealer coatings	60	0.5
Leather stain coatings	216	1.8
Leather top coatings	120	1.0
Metallic coatings	420	3.5
Military specification one-component coatings	340	2.8

TABLE OF STANDARDS (cont.)

VOC LIMITS LESS WATER AND LESS EXEMPT COMPOUNDS		
COATING CATEGORIES	g/L	lbs/gal
Military specification two-component coatings	420	3.5
Mirror backing curtain coated coatings	500	4.2
Mirror backing rolled coated coatings	312	2.6
Mold seal coatings	750	6.3
Multi-color coatings	680	5.7
Refrigerated glass door coatings	480	4.0
Optical coatings	50	0.4
Vacuum metalizing coatings	800	6.7

(2) Solvent cleaning operations and the storage and disposal of VOC-containing materials are subject to the provisions of Rule 1171 - Solvent Cleaning Operations.

(3) Transfer Efficiency

A person shall not apply coatings unless the coating is applied with equipment operated according to the 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 coating application methods as are demonstrated to the Executive Officer to be capable of achieving at least equivalent or better transfer efficiency to the method listed in subparagraph (c)(3)(F), using District approved procedures and for which written approval of the Executive Officer has been obtained.

(4) Air Pollution Control Equipment

A person may comply with the provisions of paragraph (c)(1), (c)(2), or (c)(3) 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.

(5) 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 prior to application of such coating and provided the applicator demonstrates that the intended use of each coated object would require coatings with an extreme performance coating.

(d) Recordkeeping Requirements

Records shall be maintained pursuant to Rule 109.

(e) Compliance Test Methods

The following test methods and procedures shall be used to determine compliance with this rule. Alternative test methods may be used if they are determined to be equivalent and approved in writing by the Executive Officer, the California Air Resources Board (CARB) and the United States Environmental Protection Agency (USEPA).

(1) The VOC content of materials subject to the provisions of this rule shall be determined by:

(A) The 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 compounds' content shall be determined by SCAQMD Laboratory Methods 302 (Distillation of Solvents from Paints, Coatings and Inks) and 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's) 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 subdivision (c), only at such time as manufacturers specify which individual compounds are used in the coating formulations and identify the USEPA, CARB, and the SCAQMD approved test methods, used to quantify the amount of each exempt compound.

(2) Determination of Efficiency of Emission Control System

(A) The capture efficiency of an emission control system shall be determined by verifying the use of a Permanent Total Enclosure (PTE) and 100 percent capture efficiency as defined by USEPA Method 204 "Criteria for and Verification of a Permanent or Temporary Total Enclosure." Alternatively, if a USEPA Method 204 defined PTE is not employed, capture efficiency shall be determined using a minimum of three sampling runs subject to data quality criteria presented in the USEPA technical guidance document "Guidelines for Determination Capture Efficiency, January 9, 1995." Individual capture efficiency test runs subject to the USEPA technical guidelines shall be determined by:

(i) the Temporary Total Enclosure (TTE) approach of USEPA Methods 204 through 204F; or

(ii) the SCAQMD "Protocol for Determination of Volatile Organic Compounds (VOC) Capture Efficiency."

(B) The efficiency of the control device of the emission control system as specified in paragraph (c)(4) and the VOC content in the control device exhaust gases, measured and calculated as carbon, shall be determined by the USEPA Test Method 25, 25A, or SCAQMD Method 25.1 (Determination of Total Gaseous Non-Methane Organic Emissions as

Carbon) as applicable. USEPA Test Method 18, or CARB Method 422 shall be used to determine emissions of exempt compounds.

(C) The overall efficiency of an emission control system shall be determined using the following equation:

Overall Efficiency = (Capture Efficiency) x (Control Equipment Efficiency)/100

(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) Demonstration of transfer efficiency shall be conducted in accordance with SCAQMD method "Spray Equipment Transfer Efficiency Test Procedure for Equipment User, May 24, 1989."

(5) All test methods referenced in this section shall be the most recently approved version.

(f) Alternative Emission Control

A person may achieve compliance with paragraph (c)(1) by means of an Alternative Emission Control Plan pursuant to Rule 108.

(g) Prohibition of Specification and Sales

(1) A person shall not specify the use, in the SCAQMD, of any coating to be applied to any plastic, rubber, leather, or glass, 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.

(2) Except as provided in subdivision (i), a person shall not apply, sell, or offer for sale, manufacture, formulate, or repackage any plastic, rubber, leather or glass coating materials for the use in the SCAQMD that at the time of sale exceeds the applicable VOC content specified in paragraph (c)(1).

The prohibition of specifications and sales shall not apply to plastic, rubber, leather, or glass coating materials shipped, supplied or sold to a person for use outside the SCAQMD or to coatings used exclusively in air pollution control equipment that complies with the requirements of paragraph (c)(4).

(h) 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.

(i) Exemptions

(1) The provisions of paragraph (c)(1) 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;

(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, and for which written approval of the Executive Officer has been obtained;

(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, provided that a written petition that demonstrates compliant coatings are not available is submitted to 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 this rule shall not apply to aerosol coating products.

(3) The provisions of paragraph (c)(3) shall not apply to airbrush operations using 5 gallons or less per year.

(4) The VOC limit for the general one-component coating category in paragraph (c)(1) shall not apply to polyurethane shoe sole coating operations provided that:

(A) the VOC limit of all coatings used for polyurethane shoe sole coating operations does not exceed 800 grams per liter or 6.7 pounds per gallon;

(B) the operation does not use more than 160 gallons per month averaged over a consecutive 12 month period;

(C) the operation does not use more than 200 gallons per month during any one month; and,

(D) records are maintained for at least three years demonstrating compliance with subparagraphs (i)(4)(A), (i)(4)(B) and (i)(4)(C) and made available to the Executive Officer upon request.

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

(Adopted October 5, 1990)(Amended July 10, 1992)(Amended May 13, 1994)
(Amended September 5, 2008)(Amended November 1, 2013)

RULE 1146.1 EMISSIONS OF OXIDES OF NITROGEN FROM SMALL INDUSTRIAL, INSTITUTIONAL, AND COMMERCIAL BOILERS, STEAM GENERATORS, AND PROCESS HEATERS

(a) 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 with the exception of RECLAIM facilities (NOx emissions only).

(b) Definitions

(1) ADSORPTION CHILLER UNIT means any natural gas fired unit that captures and uses waste heat to provide cold water for air conditioning and other process requirements.

(2) 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.

(3) ATMOSPHERIC UNIT means any natural gas fired unit with a non-sealed combustion chamber in which natural draft is used to exhaust combustion gases.

(4) BOILER OR STEAM GENERATOR means any combustion equipment fired with liquid and/or gaseous (including landfill and digester gas) 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 open heated tank, adsorption chiller unit, or 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.

(5) BTU means British thermal unit or units.

(6) COMMERCIAL OPERATION means any office building, lodging place, or similar location designed for tenancy by one or more business entities or residential occupants.

(7) HEALTH FACILITY has the same meaning as defined in Section 1250 of the California Health and Safety Code.

(8) INDUSTRIAL OPERATION means any entity engaged in the production and/or provision of chemicals, foods, textiles, fabricated metal products, real estate, personal services or other kindred or allied products or services.

(9) INSTITUTIONAL OPERATION means any public or private establishment constituted to provide medical, educational, governmental, or other similar services to promote safety, order, and welfare.

(10) NOx EMISSIONS means the sum of nitric oxide and nitrogen dioxide in the flue gas, collectively expressed as nitrogen dioxide.

(11) OPEN HEATED TANK means a non-pressurized self-heated tank that may include a cover or doors that can be opened or detached to put in or remove parts, components or other material for processing in the tank. Tanks heated solely by an electric heater, boiler, thermal fluid heater or heat recovered from another process using heat exchangers are excluded from this definition.

(12) PROCESS HEATER means any combustion equipment fired with liquid and/or gaseous (including landfill and digester gas) 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.

(13) 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.

(14) SCHOOL means any public or private school, including juvenile detention facilities with classrooms, used for purposes of the education of more than 12 children at the school, including in kindergarten and grades 1 to 12, inclusive, but does not include any private school in which education is primarily conducted in private homes. The term includes any building or structure, playground, athletic field, or other area of school property, but does not include unimproved school property.

(15) THERM means 100,000 Btu.

(16) THERMAL FLUID HEATER means a PROCESS HEATER in which a process is heated indirectly by a heated fluid other than water.

(17) UNIT means any boiler, steam generator, or process heater as defined in paragraph (b)(4) or (b)(12).

(c) Requirements

(1) On or after September 5, 2008, the owner or operator of any unit subject to subdivision (a) shall operate such unit so that it discharges into the atmosphere no more than 30 ppm of NOx emissions or for natural gas fired units 0.037 pound NOx per million Btu of heat input, as specified in the permit to operate.

(2) An owner or operator of any unit subject to subdivision (a) must select to comply with one of the following NOx emission limits specified in Table 1146.1-1 and apply for a permit to construct to operate such unit in compliance with the selected emission limit and the corresponding permit application and full compliance dates.

Table 1146.1-1

Category	**Limit**	**Submit Application for Permit to Construct on or before**	**Unit Shall be in Full Compliance on or before**
Any Units Fired on Landfill Gas	25 ppm	January 1, 2014	January 1, 2015
Any Units Fired on Digester Gas	15 ppm	January 1, 2014	January 1, 2015
Atmospheric Units	12 ppm or 0.015 lbs/10^6 Btu	January 1, 2013	January 1, 2014
Any Units Fired on Natural Gas, Excluding Units Located at Schools and Universities, Atmospheric Units, and Thermal Fluid Heaters	9 ppm or 0.011 lbs/10^6 Btu	January 1, 2011	January 1, 2012
Any Units Fired on Natural Gas Located at Schools and Universities, Excluding Atmospheric Units, and Thermal Fluid Heaters		January 1, 2013	January 1, 2014

(3) For dual fuel co-fired combustion units a weighted average limit calculated by Equation 1146.1-1 may be used provided a totalizing fuel flow meter is installed pursuant to paragraph (c)(7), for units burning a combination of both fuels.

Weighted Limit = $\frac{(CL_A \times Q_A) + (CL_B \times Q_B)}{Q_A + Q_B}$ **Equation 1146.1-1**

Where:

CL_A = compliance limit for fuel A
CL_B = compliance limit for fuel B
Q_A = heat input from fuel A
Q_B = heat input from fuel B

(4) The owner or operator of any unit(s) with a heat input capacity greater than 2 million Btu per hour shall not discharge into the atmosphere carbon monoxide (CO) emissions in excess of 400 ppm or for natural gas fired units 0.30 lbs/10^6 Btu.

(5) In lieu of complying with the applicable emission limits specified in paragraph (c)(1), (c)(2), (c)(3), and (c)(4) any unit(s) subject to subdivision (a) in operation prior to September 5, 2008, 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 four to eight 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. The operator of any unit(s) selecting the tune-up option shall maintain records for a rolling of twenty four month period verifying that the required tune-ups have been performed. If the unit does not operate throughout a continuous six-month period

within 12month period, only one tuneup is required for the twelve month period that includes the entire period of non-operation. For this case, the tune-up shall be conducted within 30 days of start-up. No tune-up is required during a rolling twelve month period for any unit that is not operated during that rolling 12month period; 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 rolling twenty four month period, and shall be made accessible upon request from an authorized District representative upon request.

(6) An owner or operator that has installed or modified a natural gas fired unit prior to September 5, 2008 complying with the applicable BACT emission limit of 12 ppm or less of NOx may defer compliance with paragraph (c)(2) until the unit's burner(s) replacement.

(7) Any owner or operator who chooses the pound per million Btu of heat input compliance option in paragraph (c)(1), (c)(2), or (c)(4) for natural gas fired units or chooses the weighted average emission limit using Equation 1146.1-1 under paragraph (c)(3) shall install a non-resettable, totalizing fuel meter for each fuel used on an individual unit basis, as approved by the Executive Officer.

(8) On or after January 1, 2015, an owner operator of any landfill or digester gas (biogas) unit co-fired with natural gas shall not operate the unit in a manner that exceeds the applicable landfill or digester gas emission concentration limits specified in paragraph (c)(2), provided that the facility monthly average biogas usage by the biogas units is 90% or more, based on the higher heating value of the fuels used.

(A) The Executive Officer may approve the burning of more than 10% up to:

(i) 25% natural gas in a biogas fired unit at the 15 ppm (digester gas) or 25 ppm (landfill gas) NOx level, when it is necessary, if the only alternative to limiting natural gas to 10% would be shutting down the unit and flaring more biogas.

(ii) 50% natural gas in a digester gas-fired unit at the 15 ppm NOx level, when it is necessary as specified in clause (c)(8)(A)(i) and for units installed on or after September 5,

2008 provided the unit has demonstrated compliance with the NOx limits in paragraph (c)(2) applicable to units fired exclusively on natural gas.

For units subject to this subparagraph, the percent natural gas usage shall be based on the facility monthly average biogas usage by the biogas units and the higher heating value of the fuels used.

(B) Any biogas-fired unit burning more than the approved percent natural gas as determined under subparagraph (c)(8)(A) shall comply with the weighted average NOx limit specified in paragraph (c)(3).

(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 paragraph (c)(1), (c)(2), (c)(3), or (c)(4).

(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. An compliance determination as specified in paragraph (d)(6) shall be conducted at least 250 operating hours, or at least thirty days subsequent to the tuning or servicing of any unit, unless it is an unscheduled repair.

(3) All parts per million emission limits specified in subdivision (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 NOx and CO emission requirements of paragraphs (c)(1) through (c)(4) and the stack-gas oxygen concentration requirement of subparagraph (c)(5)(A) shall be determined using a District approved contractor under the Laboratory Approval Program according to the following procedures:

(A) District Source Test Method 100.1 - Instrumental Analyzer Procedures for Continuous Gaseous Emission Sampling (March 1989); or

(B) District Source Test 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

(C) United States Environmental Protection Agency Conditional Test Method CTM-030, Determination of Nitrogen Oxides, Carbon Monoxide, and Oxygen Emissions from Natural Gas-Fired Engines, Boilers and Process Heaters Using Portable Analyzers; or

(D) ASTM D6522-00(2005) Standard Test Method for Determination of Nitrogen Oxides, Carbon Monoxide, and Oxygen Concentrations in Emissions from Natural Gas-Fired Reciprocating Engines, Combustion Turbines, Boilers, and Process Heaters Using Portable Analyzers

(E) any other test method determined to be alternative 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 (five years for Title V facilities) 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 per million Btu of heat input compliance option of paragraph (c)(1), (c)(2), or (c)(4) for natural gas fired units, NOx 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 and CO emissions in pounds per million Btu of heat input shall be calculated according to the Protocol for the Periodic Monitoring of Nitrogen Oxides, Carbon Monoxide, and

Oxygen from Units Subject to South Coast Air Quality Management District Rules 1146 and 1146.1.

(6) Compliance determination with the NOx emission requirements specified in paragraph (d)(4) shall be conducted once every five years.

(7) Any owner or operator of units subject to this rule shall perform diagnostic emission checks of NOx emissions with a portable NOx, CO and oxygen analyzer according to the Protocol for the Periodic Monitoring of Nitrogen Oxides, Carbon Monoxide, and Oxygen from Units Subject to South Coast Air Quality Management District Rules 1146 and 1146.1 according to the following schedule:

(A) On or after July 1, 2009, the owner or operator of units subject to paragraphs (c)(1) through (c)(4) shall check NOx emissions at least quarterly or every 2,000 unit operating hours, whichever occurs later. If a unit is in compliance for four consecutive required diagnostic emission checks, without any adjustments to the oxygen sensor set points, then the unit may be checked semi-annually or every 4,000 unit operating hours, whichever occurs later, until the diagnostic emission check exceeds the applicable limit specified in paragraphs (c)(1), (c)(2), or (c)(3).

(B) On or after January 1, 2015 or during burner replacement, whichever occurs later, units subject to paragraph (c)(5) shall check NOx emissions according to the tune-up schedule specified in subparagraph (c)(5)(B).

(C) Records of all monitoring data required under subparagraphs (d)(7)(A) and (d)(7)(B) shall be maintained for a rolling twelve month period of two years (five years for Title V facilities) and shall be made available to District personnel upon request.

(D) The portable analyzer diagnostic emission checks required under subparagraphs (d)(7)(A) and (d)(7)(B) shall only be conducted by a person who has completed an appropriate District-approved training program in the operation of portable analyzers and has received a certification issued by the District.

(8) An owner or operator shall comply with the requirements as applied to CO emissions specified in paragraphs (d)(6) and (d)(7).

(9) A diagnostic emission check conducted under the requirements specified in paragraph (d)(7) that finds emissions in excess of those allowed by this

rule or a permit condition shall not constitute a violation of this rule if the owner or operator corrects the problem and demonstrate compliance with another emission check within 72 hours from the time the owner or operator knew of excess emissions, or reasonably should have known, or shut down the unit by the end of an operating cycle, whichever is sooner.

(10) Notwithstanding the requirements specified in paragraph (d)(9) any diagnostic emission check conducted by District staff that finds emissions in excess of those allowed by this rule or a permit condition is a violation.

(11) An owner or operator may opt to lower the unit's rated heat input capacity. The lowered rated heat input capacity shall not be less than or equal to 2 million Btu per hour and shall be based on manufacturer's identification or rating plate or permit condition.

(e) Compliance Schedule

(1) Owners or operators of units shall comply with the applicable schedule specified in paragraphs (c)(1) and (c)(2).

(2) On or after January 1, 2015 or during burner replacement, whichever is later, no person shall operate in the District any unit subject to paragraph (c)(5) which does not meet the emissions limits specified in paragraph (c)(1).

(3) If any unit subject to paragraph (c)(5) exceeds 18,000 therms of annual heat input from all fuels used in any twelve month period, the owners or operators shall:

(A) within 4 months after exceeding 18,000 therms of heat input in any twelve month period, submit required applications for permits to construct and operate; and

(B) within 18 months after exceeding 18,000 therms of heat input in any twelve month period, demonstrate and maintain compliance with all applicable requirements specified in paragraphs (c)(1) through (c)(4) for the life of the unit.

(4) The Executive Officer shall grant a time extension to the full compliance date with the applicable NOx compliance limits for any natural gas fired units specified in paragraph (c)(2) for any health facility as defined in Section 1250 of the California Health and Safety Code that can demonstrate that the Office of Statewide Health Planning and Development has approved an extension of time to comply with seismic

safety requirements pursuant to Health and Safety Code Sections 130060 and 130061.5. The extension of time granted by the Executive Officer shall be consistent with the time extension granted pursuant to Health and Safety Code Section 130060 but not to exceed January 1, 2015 and shall be consistent with the time extension granted pursuant to Health and Safety Code Section 130061.5 but not to exceed January 1, 2020. Those health facilities granted a time extension shall submit a compliance plan to the Executive Officer on or before January 1, 2010.

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.

However, complete the remaining portion of this procedure to determine whether still lower oxygen levels are practical.

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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%

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.

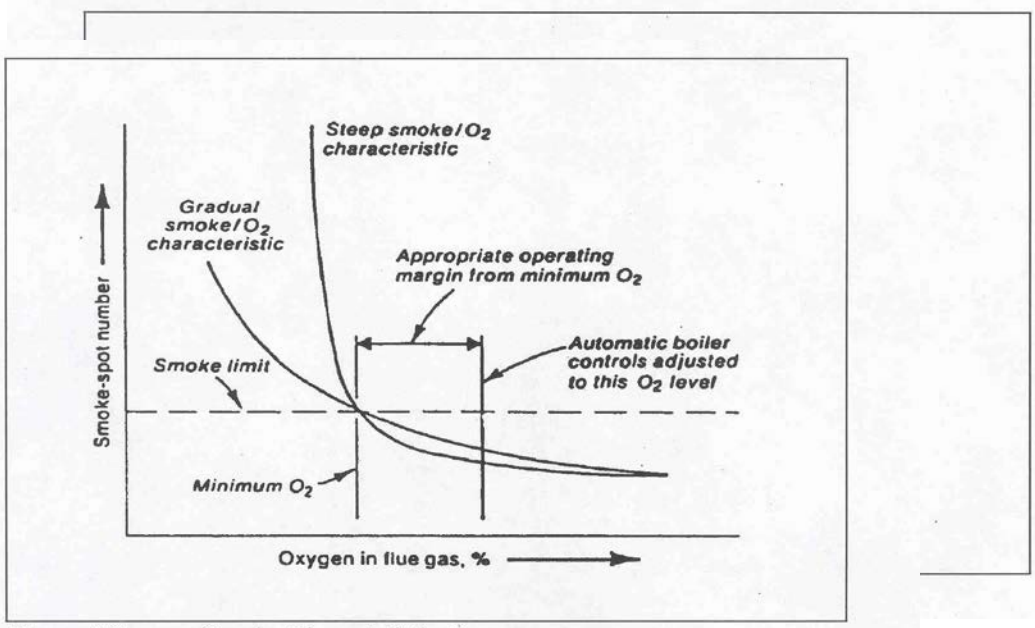

Figure 2 Oxygen/Smoke Characteristic Curve

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 O2 to 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 at inlet to 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.

(Adopted January 9, 1998) (Amended January 7, 2005) (Amended May 5, 2006)

RULE 1146.2. EMISSIONS OF OXIDES OF NITROGEN FROM LARGE WATER HEATERS AND SMALL BOILERS AND PROCESS HEATERS

(a) Purpose and Applicability

The purpose of this rule is to reduce NOx emissions from natural gas-fired water heaters, boilers, and process heaters as defined in this rule. This rule applies to units that have a rated heat input capacity less than or equal to 2,000,000 Btu per hour. Type 1 Units as defined in this rule are typically, but not exclusively, large water heaters or smaller-sized process heaters in the above range. Type 2 Units as defined in this rule are typically, but not exclusively, small boilers or larger-sized process heaters in this range. Beginning, January 1, 2000, the provisions of this rule are applicable to manufacturers, distributors, retailers, refurbishers, installers and operators of new units. Beginning, July 1, 2002, the provisions of this rule are also applicable to operators of existing Type 2 Units.

(b) Definitions

(1) BOILER OR STEAM GENERATOR means any equipment that is fired with or is designed to be fired with natural gas, 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.

(2) BTU means British thermal unit or units.

(3) CERTIFIED RETROFIT KIT means any burner and ancillary controls or blowers that have been demonstrated to comply with the provisions of this rule, on a retrofit basis, on a particular model of unit.

(4) FIRE TUBE BOILER means a BOILER in which hot gases from the combustion chamber pass through one or more tubes within the boiler.

(5) HEAT INPUT means the higher heating value of the fuel to the unit measured as BTU per hour.

(6) HEAT OUTPUT means the enthalpy of the working fluid output of the unit.

(7) 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.

(8) INSTANTANEOUS WATER HEATER means a WATER HEATER with a rated heat input capacity less than or equal to 2,000,000 Btu per hour that heats water only when it flows through a heat exchanger.

(9) NOx EMISSIONS means the sum of nitrogen oxide and nitrogen dioxide in the flue gas, collectively expressed as nitrogen dioxide.

(10) POOL HEATER means a WATER HEATER designed to heat a pool, hot tub or spa.

(11) PROCESS HEATER means any equipment that is fired with or is designed to be fired with natural gas and which transfers heat from combustion gases to water or process streams. Process Heater does not include any kiln or oven used for annealing, 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.

(12) PROTOCOL means South Coast Air Quality Management District Protocol: Nitrogen Oxides Emissions Compliance Testing for Natural Gas-Fired Water Heaters and Small Boilers.

(13) RATED HEAT INPUT CAPACITY means the gross heat input of the combustion device, as supported by required documentation and which shall be specified on a permanent rating plate.

(14) RECREATIONAL VEHICLE means any vehicle used for recreational purposes designed to include a water heater and licensed to be driven or moved on the highways of California.

(15) REFURBISHER means anyone who reconditions a Type 1 Unit or Type 2 Unit and offers the unit for resale, for use in the District.

(16) RESELLER means anyone who sells either retail, wholesale or on an individual basis Type 1 Units or Type 2 Units.

(17) RESIDENTIAL means any structure which is designed for and used exclusively as a dwelling for not more than four families, and where such equipment is used by the owner or occupant of such a dwelling.

(18) TANK TYPE WATER HEATER means a WATER HEATER with a rated heat input capacity from 75,000 Btu per hour to 2,000,000 Btu per hour

and with an integral closed vessel in which water is heated and stored for use external to the vessel.

(19) THERM means 100,000 BTU.

(20) THERMAL FLUID HEATER means a PROCESS HEATER in which a process is heated indirectly by a heated fluid other than water.

(21) TYPE 1 UNIT means any water heater, boiler or process heater with a RATED HEAT INPUT CAPACITY less than or equal to 400,000 BTU per hour excluding TANK TYPE WATER HEATERS subject to the limits of District Rule 1121.

(22) TYPE 2 UNIT means any water heater, boiler or process heater with a RATED HEAT INPUT CAPACITY greater than 400,000 BTU per hour up to and including 2,000,000 BTU per hour.

(23) UNIT means any boiler, steam generator, water heater or process heater as defined in paragraph (b)(1), (b)(3), (b)(4), (b)(8), (b)(10), (b)(11), (b)(18), (b)(20), (b)(21), (b)(22) or (b)(24).

(24) WATER HEATER means any equipment that is fired with or designed to be fired with natural gas and that is used solely to heat water for use external to the equipment.

(c) Requirements

(1) On or after January 1, 2000, no person shall manufacture for use, or offer for sale for use, in the District any new Type 2 Unit, unless the NOx emissions level is less than or equal to 30 ppm of NOx emissions (at 3% O_2, dry) or 0.037 pound NOx per million Btu of heat input and no more than 400 ppm of carbon monoxide (at 3% O_2, dry), as certified by the District according to subdivision (d).

(2) On or after January 1, 2001, no person shall manufacture for use, or offer for sale for use, in the District any new Type 1 Unit, unless the NOx emissions level is less than or equal to 40 nanograms of NOx (calculated as NO_2) per joule (93 lb per billion Btu) of heat output or 55 ppm NOx emissions (at 3% O_2, dry), as certified by the District according to subdivision (d).

(3) On or after July 1, 2002, no person shall operate in the District any unit with a rated heat input capacity greater than 1,000,000 Btu per hour but less than or equal to 2,000,000 Btu per hour manufactured prior to January 1, 1992, which does not meet the emissions limits required by paragraph

(c)(1). Alternatively, a unit may be modified or demonstrated to meet the emission limits of paragraph (c)(1) pursuant to the provisions of subdivision (e).

(4) On or after January 1, 2006, no person shall operate in the District any unit more than 15 years old, based on the original date of manufacture as specified in paragraph (c)(6), with a rated heat input capacity greater than 1,000,000 Btu per hour but less than or equal to 2,000,000 Btu per hour and manufactured on or after January 1, 1992, which does not meet the emissions limits required by paragraph (c)(1). Alternatively, a unit may be modified or demonstrated to meet the emission limits of paragraph (c)(1) pursuant to the provisions of subdivision (e).

(5) On or after January 1, 2006, no person shall operate in the District any unit more than 15 years old, based on the original date of manufacture as specified in paragraph (c)(6), with a rated heat input capacity greater than 400,000 Btu per hour but less than or equal to 1,000,000 Btu per hour manufactured prior to January 1, 2000, which does not meet the emissions limits required by paragraph (c)(1). Alternatively, a unit may be modified or demonstrated to meet the emission limits of paragraph (c)(1) pursuant to the provisions of subdivision (e).

(6) The original date of manufacture shall be determined by:

(A) Original manufacturer's identification or rating plate permanently fixed to the equipment. If not available, then;

(B) Invoice from manufacturer for purchase of equipment. If not available, then:

(C) Unit is deemed to be more than 15 years old.

(7) On or after January 1, 2010, no person shall manufacture for use or offer for sale for use within the District any Type 2 unit unless the unit is certified pursuant to subdivision (d) to a NOx emission level of less than 14 nanograms of NOx (calculated as NO_2) per joule of heat output or less than or equal to 20 ppm of NOx emissions (at 3% O_2, dry).

(8) On or after January 1, 2012, no person shall manufacture for use or offer for sale for use within the District any Type 1 unit (excluding pool heaters), unless the unit is certified pursuant to subdivision (d) to a NOx emission level of less than 14 nanograms of NOx (calculated as NO_2) per joule of heat output or less than or equal to 20 ppm of NOx emissions (at 3% O_2, dry).

(9) On or after May 5, 2006, the owner or operator of any Type 2 unit shall perform maintenance in accordance with the manufacturer's schedule and specifications as identified in a manual and other written materials supplied by the manufacturer or distributor. The owner or operator shall maintain on site a copy of the manufacturer's and/or distributor's written instructions and retain a record of the maintenance activity for a period of not less than three years.

(10) The owner or operator shall maintain on site a copy of all documents identifying the unit's rated heat input capacity. The rated heat input capacity shall be identified by a manufacturer's or distributor's manual or invoice. If a unit is modified, the rated heat input capacity shall be calculated pursuant to paragraph (f)(3). The documentation of rated heat input capacity for modified units shall include a description of all modifications, the dates the unit was modified and calculation of rated heat input capacity. All documentation shall be signed by the licensed person modifying the unit.

(11) Notwithstanding the requirements in paragraph (c)(7), until December 31, 2010, any person may sell, offer for sale, or install any Type 2 units that are manufactured and purchased prior to January 1, 2010 and in compliance with paragraph (c)(1).

(12) Notwithstanding the requirements in paragraph (c)(8), until December 31, 2012, any person may sell, offer for sale, or install any Type 1 units that are manufactured and purchased prior to January 1, 2012 and in compliance with paragraph (c)(2).

(d) Certification

(1) The manufacturer shall obtain confirmation from an independent testing laboratory prior to applying for certification that, each unit model or retrofit kit complies with the applicable requirements of subdivision (c). 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 units subject to this rule.

(2) When applying for unit(s) certification, 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 unit rating plate;

(C) A description of each model being certified; and

(D) A source test report verifying compliance with the emission limits in 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 (90) days prior to the date of submittal to the Executive Officer.

(3) When applying for unit certification, the manufacturer shall submit the items identified in paragraph (d)(2) no more than ninety (90) days after the date of the source test identified in subparagraph (d)(2)(D) and at least 120 days prior to the date of the proposed sale of the units.

(4) The Executive Officer shall certify a unit 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 may be required according to the requirements of paragraphs (d)(1) and (d)(2).

(e) Modification (Retrofit) Provisions and Demonstration of Compliance With Emission Limits.

Any unit, may be modified or demonstrated to meet the requirements of paragraph (c)(1), (c)(2), (c)(3), (c)(4), or (c)(5) provided:

(1) The unit is certified pursuant to subdivision (d); or

(2) A certified retrofit kit has been installed; or

(3) A copy of a source test report conducted by an independent third party, demonstrating the specific unit complies with the emission limits at low and high fire, shall be maintained on-site; and

(4) The source test report clearly specifies the emissions limit of the unit in parts per million or pounds of NOx per million Btu of heat input. The

source test report must identify that the source test was conducted pursuant to a District approved protocol; and

(5) The source test report shall be maintained on-site at the facility where the unit is being operated and made available to the Executive Officer, at all times, upon request, as long as the unit is being operated. The model and serial numbers of the specified unit shall clearly be indicated on the source test report.

(f) Identification of Compliant Units

(1) Newly Manufactured Units

The manufacturer shall display the model number of the unit complying with subdivision (c) on the shipping carton and permanent rating plate. The manufacturer shall also display the certification status on the shipping carton and on the unit.

(2) Certified Retrofit Kits

The manufacturer shall display the model number of the retrofit kit and manufacturer and model of applicable units on the shipping carton and in a plainly visible portion of the retrofit kit.

(3) Modified Units

A unit with a new or modified burner shall display the new rated heat input capacity and certification status on a new permanent rating plate. The gross heat input shall be based on the maximum fuel input corrected for fuel heat content, temperature and pressure.

(g) Enforcement

The Executive Officer may periodically inspect distributors, retailers, and installers of units located in the District, and conduct such tests as are deemed necessary to ensure compliance with subdivision (c).

(h) Exemptions

(1) The provisions of this rule shall not apply to:

(A) Units used in recreational vehicles.

(B) Units subject to the limits in District Rule 1121 – Control of Nitrogen Oxides From Residential Type, Natural Gas-fired Water Heaters.

(2) The provisions of paragraphs (c)(3), (c)(4), and (c)(5) shall not apply to:

(A) Any residential unit.

(B) Units with a rated heat input capacity greater than 400,000 Btu per hour, but less than or equal to 2,000,000 Btu per hour that are demonstrated to use less than 9,000 therms during every calendar year. Compliance with the exemption limit shall be demonstrated by a calculation based on the annual fuel consumption recorded by an in line fuel meter or the annual operating hours recorded by a timer and using one of the following methods.

(i) Annual therm usage recorded by fuel meter and corrected to standard pressure; or

(ii) Amount of fuel (i.e., in thousand cubic feet of gas corrected to standard pressure) converted to therms using the higher heating value of the fuel; or

(iii) Annual therm usage calculated by multiplying the number of hours fuel is burned by the rated heat input capacity of the unit converted to therms.

(3) The NOx emission limits of paragraphs (c)(1), (c)(2), (c)(3), (c)(4) and (c)(5) of this rule shall not apply to units located at RECLAIM facilities.

(i) Progress Reports

Any person that manufacturers Type 1 units or Type 2 fire tube boilers, steam boilers producing steam pressure greater than 100 pounds per square inch or thermal fluid heaters subject to this rule shall submit to the District a report on progress towards compliance with the emission limits of paragraphs (c)(7) and (c)(8). Progress reports shall include detailed information on all burner and control technologies evaluated and emission tests. The progress reports shall be submitted to the District for the following categories of equipment by the specified date:

(1) Type 2 fire tube boilers, steam boilers producing steam pressure greater than 100 pounds per square inch and thermal fluid heaters shall be submitted to the District by January 31, 2008.

(2) Type 1 units shall be submitted to the District by January 31, 2010.

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

(Adopted September 9, 1988)(Amended January 6, 1989)
(Amended May 13, 1994)(Amended June 16, 2000)
(Amended November 17, 2000)(Amended September 5, 2008)
(Amended November 1, 2013)

RULE 1146 EMISSIONS OF OXIDES OF NITROGEN FROM INDUSTRIAL, INSTITUTIONAL, AND COMMERCIAL BOILERS, STEAM GENERATORS, AND PROCESS HEATERS

(a) 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.

(4) RECLAIM facilities (NOx emissions only)

(b) Definitions

(1) ADSORPTION CHILLER UNIT means any natural gas fired unit that captures and uses waste heat to provide cold water for air conditioning and other process requirements.

(2) 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.

(3) ANNUAL HEAT INPUT means the actual amount of heat released by fuels burned in a unit during a calendar year.

(4) ATMOSPHERIC UNIT means any natural gas fired unit with a heat input less than or equal to 10 million Btu per hour with a non-sealed combustion chamber in which natural draft is used to exhaust combustion gases.

(5) BOILER or STEAM GENERATOR means any combustion equipment fired with liquid and/or gaseous (including landfill and digester gas) 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 open heated tank, adsorption chiller unit, or 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.

(6) BTU means British thermal unit.

(7) COMMERCIAL OPERATION means any office building, lodging place, or similar location designed for tenancy by one or more business entities or residential occupants.

(8) GROUP I UNIT means any unit burning natural gas with a rated heat input greater than or equal to 75 million Btu per hour, excluding thermal fluid heaters.

(9) GROUP II UNIT means any unit burning gaseous fuels, excluding digester and landfill gases, with a rated heat input less than 75 million Btu per hour down to and including 20 million Btu per hour, excluding thermal fluid heaters.

(10) GROUP III UNIT means any unit burning gaseous fuels, excluding digester and landfill gases, and thermal fluid heaters with a rated heat input less than 20 million Btu per hour down to and including 5 million Btu per hour, and all units operated at schools and universities greater than or equal to 5 million Btu per hour.

(11) HEALTH FACILITY has the same meaning as defined in Section 1250 of the California Health and Safety Code.

(12) 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.

(13) INDUSTRIAL OPERATION means any entity engaged in the production and/or provision of chemicals, foods, textiles, fabricated metal products, real estate, personal services or other kindred or allied products or services.

(14) INSTITUTIONAL OPERATION means any public or private establishment constituted to provide medical, educational, governmental, or other similar services to promote safety, order, and welfare.

(15) NOx EMISSIONS means the sum of nitric oxide and nitrogen dioxide in the flue gas, collectively expressed as nitrogen dioxide.

(16) OPEN HEATED TANK means a non-pressurized self-heated tank that may include a cover or doors that can be opened or detached to put in or remove parts, components or other material for processing in the tank. Tanks heated solely by an electric heater, boiler, thermal fluid heater or heat recovered from another process using heat exchangers are excluded from this definition.

(17) PROCESS HEATER means any combustion equipment fired with liquid and/or gaseous (including landfill and digester gas) 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.

(18) 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.

(19) SCHOOL means any public or private school, including juvenile detention facilities with classrooms, used for purposes of the education of more than 12 children at the school, including in kindergarten and grades 1 to 12, inclusive, but does not include any private school in which education is primarily conducted in private homes. The term includes any building or structure, playground, athletic field, or other area of school property, but does not include unimproved school property.

(20) STANDBY BOILER is a boiler which operates as a temporary replacement for primary steam or hot water while the primary steam or hot water supply unit is out-of-service.

(21) THERM means 100,000 Btu.

(22) THERMAL FLUID HEATER means a PROCESS HEATER in which a process is heated indirectly by a heated fluid other than water.

(23) UNIT means any boiler, steam generator, or process heater as defined in paragraph (b)(5) or (b)(17) of this subdivision.

(c) Requirements

(1) The owner or operator shall subject all of the units within the facility to the NOx emission limits and schedules specified in Table 1146-1:

Table 1146-1 – Standard Compliance Limits and Schedule

Rule Reference	Category	Limit	Submit Compliance Plan on or before	Submit Application for Permit to Construct on or before	Unit Shall be in Full Compliance on or before
(c)(1)(A)	All Units Fired on Gaseous Fuels	30 ppm or for natural gas fired units 0.036 lbs/10^6 Btu	-	-	September 5, 2008
(c)(1)(B)	Any Units Fired on Non-gaseous Fuels	40 ppm	-	-	September 5, 2008
(c)(1)(C)	Any Units Fired on Landfill Gas	25 ppm	-	-	January 1, 2015
(c)(1)(D)	Any Units Fired on Digester Gas	15 ppm	-	-	January 1, 2015
(c)(1)(E)	Atmospheric Units	12 ppm or 0.015 lbs/10^6 Btu	January 1, 2010	January 1, 2013	January 1, 2014
(c)(1)(F)	Group I Units	5 ppm or 0.0062 lbs/10^6 Btu	-	January 1, 2012	January 1, 2013
(c)(1)(G)	Group II Units 75% or more of units (by heat input)	9 ppm or 0.011 lbs/10^6 Btu	January 1, 2010	January 1, 2011	January 1, 2012
(c)(1)(H)	Group II Units 100% of units (by heat input)		January 1, 2010	January 1, 2013	January 1, 2014
(c)(1)(I)	Group III Units 75% or more of units (by heat input)		January 1, 2011	January 1, 2012	January 1, 2013
(c)(1)(J)	Group III Units 100% of units (by heat input)		January 1, 2011	January 1, 2014	January 1, 2015

(2) In lieu of complying with the NOx emission limits and schedules specified in paragraph (c)(1), the owner or operator may elect to subject all of the units within the facility to the requirements specified in Table 1146-2. The owner or operator that fails to submit a Compliance Plan or Application for Permit to Construct pursuant to the schedule specified in Table 1146-1 for any of the Group II units shall be subject to the NOx limits and schedule specified in Table 1146-2.

Table 1146-2 – Enhanced Compliance Limits and Schedule

Rule Reference	Category	Limit	Submit Compliance Plan on or before	Submit Application for Permit to Construct on or before	Unit Shall be in Full Compliance on or before
(c)(2)(A)	Group II Units 75% or more of units (by heat input)	5 ppm or 0.0062 lbs/10^6 Btu	January 1, 2011	January 1, 2013	January 1, 2014
(c)(2)(B)	Group II Units 100% of units (by heat input)		January 1, 2011	January 1, 2015	January 1, 2016

(3) For dual fuel co-fired combustion a weighted average limit calculated by Equation 1146-1 may be used provided a totalizing fuel flow meter is installed pursuant to paragraph (c)(8), for units burning a combination of both fuels.

Weighted Limit = $$\frac{(CL_A \times Q_A) + (CL_B \times Q_B)}{Q_A + Q_B}$$ **Equation 1146-1**

Where:

CL_A = compliance limit for fuel A
CL_B = compliance limit for fuel B
Q_A = heat input from fuel A
Q_B = heat input from fuel B

(4) The owner or operator of any unit(s) with a heat input capacity greater than or equal to 5 million Btu per hour shall not discharge into the atmosphere carbon monoxide (CO) emissions in excess of 400 ppm or for natural gas fired units 0.30 lbs/10^6 Btu.

(5) In lieu of complying with the applicable emission limits specified in paragraphs (c)(1), (c)(2), (c)(3), and (c)(4), the owner or operator of any unit(s) in operation prior to September 5, 2008 with an annual heat input less than or equal to 9.0 x 10^9 Btu (90,000 therms) per year, shall:

(A) operate the unit(s) 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) tune the unit(s) 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 tune-up procedure. If a different tune-up procedure from that described in Attachment 1 is used then a copy of this procedure shall be kept on site. The operator of any unit(s) selecting the tune-up option shall maintain records for a rolling twenty four month period verifying that the required tune-ups have been performed. If the unit does not operate throughout a continuous six-month period within a twelve month period, only one tuneup is required for the twelve month period that includes the entire period of non-operation. For this case, the tune-up shall be conducted within thirty (30) days of start-up. No tune-up is required during a rolling twelve month period for any unit that is not operated during that rolling twelve month period; 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 rolling twenty four month period, and shall be made accessible to an authorized District representative upon request.

(6) 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 x 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 to the Executive Officer.

(7) An owner or operator that has installed or modified a Group III natural gas fired unit prior to September 5, 2008 complying with the applicable BACT emission limit of 12 ppm or less of NOx may defer compliance with subparagraphs (c)(1)(I) or (c)(1)(J) until the unit’s burner(s) replacement.

(8) Any owner or operator who chooses the pound per million Btu compliance option specified in paragraph(s) (c)(1) (c)(2), or (c)(4) or chooses the weighted average emission limit using Equation 1146-1 under paragraph

(c)(3) shall install a non-resettable totalizing fuel meter to measure the total of each fuel used by each individual unit, as approved by the Executive Officer.

(9) The owner or operator of Group II or III units shall submit for the approval of the Executive Officer a compliance plan in accordance with the requirements of Rule 221 – Plans and Rule 306 – Plan Fees by the applicable date specified in Tables 1146-1 or 1146-2. The compliance plan shall include the following information:

(A) Owner/operator contact information (company name, AQMD facility identification number, contact name, phone number, address, e-mail address).

(B) Number and size (mmbtu/hr) of Group II and III units located at the facility.

(C) Selection of the Standard (Table 1146-1) or Enhanced (Table 1146-2) compliance schedule by Group II and III units.

(D) The owner or operator of more than one unit located within the same facility that have opted to divide the units by heat input for the purpose of separate compliance dates according to Tables 1146-1 or 1146-2 shall indicate which units are categorized 75 percent or more of the heat input and which units make up the remaining 100 percent of the heat input.

(10) On or after January 1, 2015, an owner operator of any landfill or digester gas (biogas) unit co-fired with natural gas shall not operate the unit in a manner that exceeds the emission concentration limits specified in subparagraphs (c)(1)(C) or (c)(1)(D), provided that the facility monthly average biogas usage by the biogas units is 90% or more, based on the higher heating value of the fuels used.

(A) The Executive Officer may approve the burning of more than 10% up to:

(i) 25% natural gas in a biogas fired unit at the 15 ppm (digester gas) or 25 ppm (landfill gas) NOx level, when it is necessary, if the only alternative to limiting natural gas to 10% would be shutting down the unit and flaring more biogas.

(ii) 50% natural gas in a digester gas-fired unit at the 15 ppm NOx level, when it is necessary as specified in clause (c)

(10)(A)(i) and for units installed on or after September 5, 2008 provided the unit has demonstrated compliance with the NOx limits in paragraph (c)(1) applicable to units fired exclusively on natural gas.

For units subject to this subparagraph, the percent natural gas usage shall be based on the facility monthly average biogas usage by the biogas units and the higher heating value of the fuels used.

(B) Any biogas-fired unit burning more than the approved percent natural gas as determined under subparagraph (c)(10)(A) shall comply with the weighted average NOx limit specified in paragraph (c)(3).

(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 paragraphs (c)(1), (c)(2), (c)(3), and (c)(4).

(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. Compliance determination as specified in paragraph (d)(6) shall be conducted at least 250 operating hours, or at least thirty days subsequent to the tuning or servicing of any unit, unless it is an unscheduled repair.

(3) All parts per million emission limits specified in subdivision (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 paragraphs (c)(1), (c)(2), (c)(3), and (c)(4) and the stack-gas oxygen concentration requirement of subparagraph (c)(5)(A) shall be determined using a District approved contractor under the Laboratory Approval Program according to the following procedures:

(A) District Source Test Method 100.1 - Instrumental Analyzer Procedures for Continuous Gaseous Emission Sampling (March 1989), or

(B) District Source Test Method 7.1 - Determination of Nitrogen Oxide Emissions from Stationary Sources (March 1989) and

District Source Test 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

(C) United States Environmental Protection Agency Conditional Test Method CTM-030, Determination of Nitrogen Oxides, Carbon Monoxide, and Oxygen Emissions from Natural Gas-Fired Engines, Boilers and Process Heaters Using Portable Analyzers; or

(D) ASTM D6522-00(2005) Standard Test Method for Determination of Nitrogen Oxides, Carbon Monoxide, and Oxygen Concentrations in Emissions from Natural Gas-Fired Reciprocating Engines, Combustion Turbines, Boilers, and Process Heaters Using Portable Analyzers

(E) any other test method determined to be alternative 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; or

(F) a continuous in-stack nitrogen oxide monitor or equivalent verification system as specified in paragraph (c)(6).

Records of all source tests 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), (c)(2), (c)(3), or (c)(4), 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 and CO emissions in pounds per million Btu of heat input shall be calculated according to the Protocol for the Periodic Monitoring of Nitrogen Oxides, Carbon Monoxide, and Oxygen from Units Subject to South Coast Air Quality Management District Rules 1146 and 1146.1.

(6) Compliance determination with the NOx emission requirements in paragraph (d)(4) shall be conducted once:

(A) every three years for units with a rated heat input greater than or equal to 10 million Btu per hour, except for units subject to paragraph (c)(6).

(B) every five years for units with a rated heat input less than 10 million Btu per hour down to and including 5 million Btu per hour.

(7) Provided the emissions test is conducted within the same calendar year as the test required in paragraph (d)(6), an owner or operator may use the following emissions tests to comply with paragraph (d)(6):

(A) Periodic monitoring or testing of a unit as required in a Title V permit pursuant to Regulation XXX, or

(B) Relative accuracy testing for continuous emissions monitoring verification pursuant to Rule 218.1 or 40 CFR part 60 Appendix B Specification 2.

(8) Any owner or operator of units subject to this rule shall perform diagnostic emission checks of NOx emissions with a portable NOx, CO and oxygen analyzer according to the Protocol for the Periodic Monitoring of Nitrogen Oxides, Carbon Monoxide, and Oxygen from Units Subject to South Coast Air Quality Management District Rules 1146 and 1146.1 according to the following schedule:

(A) On or after July 1, 2009, the owner or operator of units subject to paragraphs (c)(1), (c)(2), (c)(3), and (c)(4) shall check NOx emissions at least monthly or every 750 unit operating hours, whichever occurs later. If a unit is in compliance for three consecutive diagnostic emission checks, without any adjustments to the oxygen sensor set points, then the unit may be checked quarterly or every 2,000 unit operating hours, whichever occurs later, until the resulting diagnostic emission check exceeds the applicable limit specified in paragraphs (c)(1), (c)(2), or (c)(3).

(B) On or after January 1, 2015 or during burner replacement, whichever occurs later, the owner or operator of units subject to paragraph (c)(5) shall check NOx emissions according to the tune-up schedule specified in subparagraph (c)(5)(B).

(C) Records of all monitoring data required under subparagraphs (d)(8)(A) and (d)(8)(B) shall be maintained for a rolling twelve

month period of two years (5 years for Title V facilities) and shall be made available to District personnel upon request.

(D) The portable analyzer diagnostic emission checks required under subparagraph (d)(8)(A) and (d)(8)(B) shall only be conducted by a person who has completed an appropriate District-approved training program in the operation of portable analyzers and has received a certification issued by the District.

(9) An owner or operator shall comply with the requirements as applied to CO emissions specified in paragraph (d)(8) and subparagraph:

(A) (d)(6)(A) for units greater than or equal to 10 mmbtu/hr, or

(B) (d)(6)(B) for units less than 10 mmbtu/hr.

(10) A diagnostic emission check conducted under the requirements specified in paragraph (d)(8) that finds emissions in excess of those allowed by this rule or a permit condition shall not constitute a violation of this rule if the owner or operator corrects the problem and demonstrate compliance with another emission check within 72 hours from the time the owner or operator knew of excess emissions, or reasonably should have known, or shut down the unit by the end of an operating cycle, whichever is sooner.

(11) Notwithstanding the requirements specified in paragraph (d)(10) any diagnostic emission check conducted by District staff that finds emissions in excess of those allowed by this rule or a permit condition is a violation.

(12) An owner or operator may opt to lower the unit's rated heat input capacity. The lowered rated heat input capacity shall not be less than or equal to 2 million Btu per hour and shall be based on manufacturer's identification or rating plate or permit condition.

(e) Compliance Schedule

(1) An owner or operator of units subject to paragraph (c)(1) shall comply with the schedule specified in Table 1146-1.

(2) An owner or operator of units subject to paragraph (c)(2) shall comply with the schedule specified in Table 1146-2.

(3) On or after January 1, 2015 or during burner replacement, whichever occurs later, no person shall operate in the District any unit subject to paragraph (c)(5) which does not meet the emissions limits specified in subparagraph (c)(1)(A) of Table 1146-1.

(4) Any unit subject to the requirements specified in paragraph (c)(5) that exceeds 90,000 therms of heat input from all fuels used in any twelve month period, the operators shall:

(A) within 4 months after exceeding 90,000 therms of heat input in any twelve month period, submit required applications for permits to construct and operate; and

(B) within 18 months after exceeding 90,000 therms of heat input in any twelve month period, demonstrate and maintain compliance with all applicable requirements of paragraphs (c)(1), (c)(2), (c)(3), and (c)(6) for the life of the unit.

(5) The Executive Officer shall grant a time extension to the full compliance date with the applicable NOx compliance limits specified in subparagraphs (c)(1)(E) through (c)(1)(J) and paragraph (c)(2) for any health facility as defined in Section 1250 of the California Health and Safety Code that can demonstrate that the Office of Statewide Health Planning and Development has approved an extension of time to comply with seismic safety requirements pursuant to Health and Safety Code Sections 130060 and 130061.5. The extension of time granted by the Executive Officer shall be consistent with the time extension granted pursuant to Health and Safety Code Section 130060 but not to exceed January 1, 2015 and shall be consistent with the time extension granted pursuant to Health and Safety Code Section 130061.5 but not to exceed January 1, 2020. Those health facilities granted a time extension shall submit a compliance plan to the Executive Officer on or before January 1, 2010.

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.

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

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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%

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.

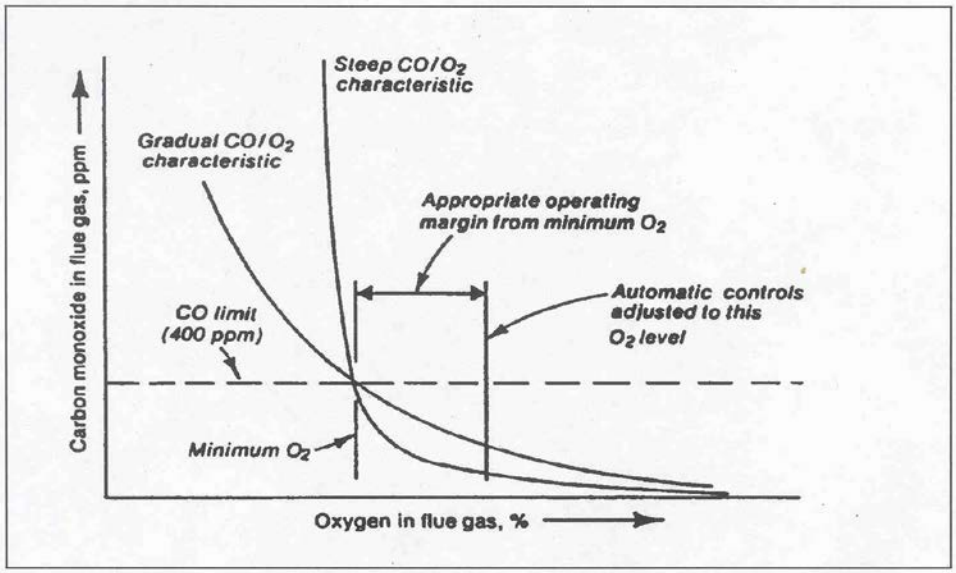


Figure 1 Oxygen/CO Characteristic Curve

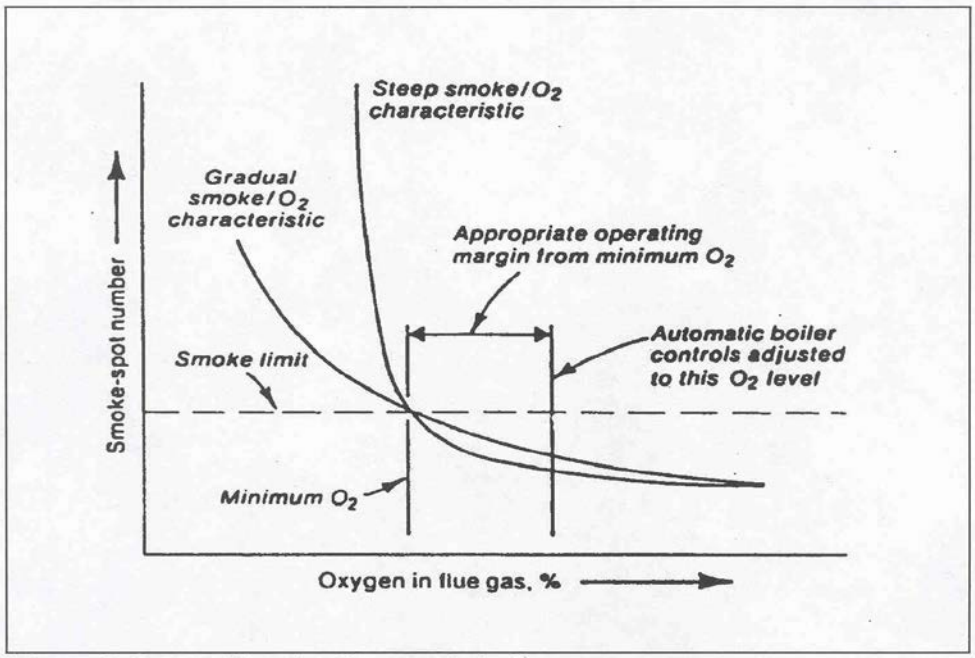


Figure 2 Oxygen/Smoke Characteristic Curve

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 O2 to 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, O2, 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 at inlet to 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% 02. 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.

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

(Adopted December 5, 2008) (Amended September 9, 2011)

RULE 1147 NOx REDUCTIONS FROM MISCELLANEOUS SOURCES

(a) Purpose and Applicability

The purpose of this rule is to reduce nitrogen oxide emissions from gaseous and liquid fuel fired combustion equipment as defined in this rule. This rule applies to ovens, dryers, dehydrators, heaters, kilns, calciners, furnaces, crematories, incinerators, heated pots, cookers, roasters, fryers, closed and open heated tanks and evaporators, distillation units, afterburners, degassing units, vapor incinerators, catalytic or thermal oxidizers, soil and water remediation units and other combustion equipment with nitrogen oxide emissions that require a District permit and are not specifically required to comply with a nitrogen oxide emission limit by other District Regulation XI rules. This rule does not apply to solid fuel-fired combustion equipment, internal combustion engines subject to District Rule 1110.2, turbines, charbroilers, or boilers, water heaters, thermal fluid heaters and enclosed process heaters subject to District Rules 1109, 1146, 1146.1, or 1146.2 and equipment subject to District Rules 1111, 1112, 1117, 1118, 1121, or 1135.

(b) Definitions

(1) ANNUAL CAPACITY FACTOR means the ratio of the ANNUAL HEAT INPUT of 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, based on the fuel's higher heating value.

(3) BTU means British thermal unit or units.

(4) COMBUSTION MODIFICATION means replacement of a burner(s).

(5) FOOD OVEN means an oven used to heat or cook food used for human consumption.

(6) HEATER means any combustion equipment that is fired with gaseous and/or liquid fuels and which transfers heat from combusted fuel to materials or air contained in the unit or in an adjoining cabinet, container or structure. Heater does not include any boiler or PROCESS HEATER designed to transfer heat to water or process streams that is subject to any

NOx emission limits of District Rules 1109, 1146, 1146.1 or 1146.2, and does not include any internal combustion engine or turbine.

(7) HEAT INPUT means the higher heating value of the fuel to the unit measured as BTU per hour.

(8) HEAT OUTPUT means the enthalpy of the working fluid output of the unit.

(9) IN-USE UNIT means any UNIT that is demonstrated to the Executive Officer that it was in operation at the current location prior to January 1, 2010.

(10) MAKE-UP AIR HEATER means a UNIT used to heat incoming air in order to maintain the temperature of a spray booth, container, room or other enclosed space where a person is working including spray booths that are also used for drying coatings and auto body spray booths with an adjacent contiguous section for drying automobile coatings. A MAKE-UP AIR HEATER is not a burner used to heat an oven, dryer, heater or other unit where workers are not present during heating.

(11) NOx EMISSIONS means the sum of nitrogen oxide and nitrogen dioxide in the flue gas, collectively expressed as nitrogen dioxide.

(12) PROCESS HEATER means any equipment that is fired with gaseous and/or liquid fuels and which transfers heat from combusted fuel to water or process streams. PROCESS HEATER does not include any furnace, kiln or oven used for melting, heat treating, annealing, 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.

(13) PROTOCOL means a South Coast Air Quality Management District approved test protocol for determining compliance with emission limits for applicable equipment.

(14) RATED HEAT INPUT CAPACITY means the gross HEAT INPUT of the combustion UNIT specified on a permanent rating plate attached by the manufacturer to the device. If the UNIT has been altered or modified such that its gross HEAT INPUT is higher or lower than the rated HEAT INPUT capacity specified on the original manufacturer's permanent rating plate, the new gross HEAT INPUT shall be considered as the rated HEAT INPUT capacity.

(15) REMEDIATION UNIT means a device used to capture or incinerate air toxics, VOCs or other combustible vapors extracted from soil or water.

(16) RESPONSIBLE OFFICIAL means:

(A) For a corporation: a president or vice-president of the corporation in charge of a principal business function or a duly authorized person who performs similar policy-making functions for the corporation; or

(B) For a partnership or sole proprietorship: general partner or proprietor, respectively.

(C) For a government agency: a duly authorized person

(17) TENTER FRAME DRYER is a cloth dryer that holds the edges of the material as it is dried in order to control shrinkage.

(18) THERM means 100,000 BTU.

(19) UNIT means any oven, dryer, dehydrator, heater, kiln, calciner, furnace, crematory, incinerator, heated pot, cooker, roaster, fryer, heated tank and evaporator, distillation unit, afterburner, degassing unit, vapor incinerator, catalytic or thermal oxidizer, soil or water remediation units and other combustion equipment with nitrogen oxide emissions requiring a District permit and not specifically required to comply with a NOx emission limit by other District Regulation XI rules. UNIT does not mean any solid fuel fired combustion equipment, internal combustion engine subject to District Rule 1110.2, turbine, charbroiler, or boiler, water heater, thermal fluid heaters or enclosed process heater subject to District Rules 1109, 1146, 1146.1, or 1146.2 or equipment subject to District Rules 1111, 1112, 1117, 1118, 1121, or 1135.

(20) VAPOR INCINERATOR means a furnace, afterburner, or other device for burning and destroying air toxics, VOCs or other combustible vapors in gas or aerosol form in gas streams.

(c) Requirements

(1) On or after January 1, 2010 any person owning or operating a unit subject to this rule shall not operate the unit in a manner that exceeds the applicable nitrogen oxide emission limit specified in Table 1 at the time a District permit is required for operation of a new, relocated or modified unit or, for in-use units, in accordance with the compliance schedule in Table 2, or at the time of a combustion modification.

Table 1 – NO_x Emission Limit

Equipment Category(ies)	NOx Emission Limit PPM @ 3% O_2, dry or Pound/mmBtu heat input		
	Process Temperature		
Gaseous Fuel-Fired Equipment	≤ 800° F	> 800 ° F and < 1200° F	≥ 1200 ° F
Asphalt Manufacturing Operation	40 ppm	40 ppm	
Afterburner, Degassing Unit, Remediation Unit, Thermal Oxidizer, Catalytic Oxidizer or Vapor Incinerator [1]	30 ppm or 0.036 lb/mmBtu	60 ppm or 0.073 lb/mmBtu	60 ppm or 0.073 lb/mmBtu
Evaporator, Fryer, Heated Process Tank, or Parts Washer	60 ppm or 0.073 lb/mmBtu	60 ppm or 0.073 lb/mmBtu	
Metal Heat Treating, Metal Melting Furnace, Metal Pot, or Tar Pot	60 ppm or 0.073 lb/mmBtu	60 ppm or 0.073 lb/mmBtu	60 ppm or 0.073 lb/mmBtu
Oven, Dehydrator, Dryer, Heater, Kiln, Crematory, Incinerator, Calciner, Cooker, Roaster, Furnace, or Heated Storage Tank	30 ppm or 0.036 lb/mmBtu	30 ppm or 0.036 lb/mmBtu	60 ppm or 0.073 lb/mmBtu
Make-Up Air Heater or other Air Heater located outside of building with temperature controlled zone inside building	30 ppm or 0.036 lb/mmBtu		
Tenter Frame or Fabric or Carpet Dryer	30 ppm or 0.036 lb/mmBtu		
Other Unit or Process Temperature	30 ppm or 0.036 lb/mmBtu	30 ppm or 0.036 lb/mmBtu	60 ppm or 0.073 lb/mmBtu
Liquid Fuel-Fired Equipment	≤ 800° F	> 800 ° F and < 1200° F	≥ 1200 ° F
All liquid fuel-fired Units	40 ppm or 0.053 lb/mmBtu	40 ppm or 0.053 lb/mmBtu	60 ppm or 0.080 lb/mmBtu

1. Emission limit applies to burners in units fueled by 100% natural gas that are used to incinerate air toxics, VOCs, or other vapors; or to heat a unit. The emission limit applies solely when burning 100% fuel and not when the burner is incinerating air toxics, VOCs, or other vapors. The unit shall be tested or certified to meet the emission limit while fueled with natural gas.

Table 2 – Compliance Schedule for In-Use Units

Equipment Category(ies)	Submit Permit Application	Unit Shall Be in Compliance
Remediation UNIT manufactured prior to 1998	Seven months prior to combustion modification or change of location.	Upon combustion modification or change of location beginning March 1, 2012
Tar Pot		All new permit applications beginning January 1, 2013
Afterburner, degassing unit, catalytic oxidizer, thermal oxidizer, vapor incinerator, evaporator, food oven, fryer, heated process tank, parts washer or spray booth make-up air heater manufactured prior to 1998	December 1, 2013	July 1, 2014
Other UNIT manufactured prior to 1986	December 1, 2011	July 1, 2012
Other UNIT manufactured prior to 1992	December 1, 2011	July 1, 2012
Other UNIT manufactured prior to 1998	December 1, 2012	July 1, 2013
Any UNIT manufactured after 1997	December 1 of the year prior to the compliance date	July 1 of the year the unit is 15 years old

(2) Unit age shall be based on:

(A) The original date of manufacture as determined by:

(i) Original manufacturer's identification or rating plate permanently fixed to the equipment. If not available, then;

(ii) Invoice from manufacturer for purchase of equipment. If not available, then;

(iii) Information submitted to AQMD with prior permit applications for the specific unit. If not available, then;

(iv) Unit is deemed by AQMD to be 20 years old; or

(B) The date that operations start for a tunnel kiln or crematory rebuilt prior to January 1, 2010 with new burner(s) as determined by:

(i) Production or fuel usage records after burner installation, and

(ii) Invoice for burner(s) installation. If not available, then;

(iii) Invoice for burner(s) purchase, If not available, then;

(iv) Manufacture date of burner(s) as identified by an attached manufacturers identification or rating plate or date stamp.

(3) In accordance with the schedule in the permit, owners or operators of units shall determine compliance with the emission limit specified in Table 1 using a District approved test protocol. The test protocol shall be submitted to the District at least 90 days prior to the scheduled test and approved by the District Source Testing Division.

(4) Notwithstanding the requirements of paragraph (c)(1), units with combustion modifications completed prior to December 5, 2008 and after January 1, 2000 that resulted in replacement of more than 75% of the rated heat input capacity shall comply with the applicable emission limit specified in Table 1 of paragraph (c)(1) ten years from the date the modification was performed.

(5) The date a combustion modification, as specified in paragraphs (c)(1) and (c)(4), is performed; shall be determined according to subparagraph (c)(2)(B), if not available, then subparagraph (c)(2)(C).

(6) Notwithstanding the requirements of paragraph (c)(1), a unit with a District permit to construct or permit to operate, and with emissions of one pound per day or less of nitrogen oxides, may defer compliance with the applicable emission limit specified in Table 1 of paragraph (c)(1) for up to five years from the applicable compliance date in Table 2 of (c)(1). NOx emissions of one pound per day or less shall be demonstrated by one of the following requirements:

(A) A unit has a rated heat input capacity of 400,000 Btu or less.

(B) The unit as of September 9, 2011 has a NOx permit emission limit of one pound per day or less, a permit condition with a process limit that results in one pound per day or less of NOx emissions including but not limited to fuel use, material throughput or operating schedule, or actual operations that results in one pound per day or less of NOx emissions. Daily operating records of unit fuel use or process rate and daily operating hours demonstrating that starting January 1, 2012 until the date of compliance, the unit has a maximum emission rate of 1 pound of NOx per day.

(C) Owners or operators of units with installed non-resettable totalizing time or fuel meters may elect to comply with the requirements of (c)(6) by requesting, no later than January 1, 2012, unit permit conditions of limits on operating hours per calendar month and/or a fuel meter and a limit on the amount of fuel use per

calendar month so that monthly NOx emissions are 30 pounds or less. Monthly emissions with a time meter shall be calculated using the maximum hourly emission rate in pounds multiplied by the hours of operation each calendar month. The maximum hourly emission rate shall be equal to the rated heat input capacity of the unit multiplied by the unit's emissions at the rated heat input capacity in pound per million Btu. Monthly emissions calculated with a fuel meter shall be equal to the unit's emission rate per unit of fuel multiplied by the amount of fuel used that calendar month.

Owners or operators of units complying under this paragraph that fail to continuously demonstrate compliance with the applicable daily or monthly requirements shall comply with the applicable emission limit in Table 1 by the applicable compliance date in Table 2 or within 210 days from the date the unit first fails to continuously comply with the daily or monthly emission limit whichever is later.

(7) On or after January 1, 2010, any person owning or operating a unit subject to this rule shall perform combustion system maintenance in accordance with the manufacturer's schedule and specifications as identified in the manual and other written materials supplied by the manufacturer or distributor. The owner or operator shall maintain on site at the facility where the unit is being operated a copy of the manufacturer's, distributor's, installer's or maintenance company's written maintenance schedule and instructions and retain a record of the maintenance activity for a period of not less than three years. The owner or operator shall maintain on site at the facility where the unit is being operated a copy of the District certification or District approved source test reports, conducted by an independent third party, demonstrating the specific unit complies with the emission limit. The source test report(s) must identify that the source test was conducted pursuant to a District approved protocol. The model and serial numbers of the specified unit shall clearly be indicated on the source test report(s). The owner or operator shall maintain on the unit in an accessible location a permanent rating plate. The maintenance instructions, maintenance records and the source test report(s) or District certification shall be made available to the Executive Officer upon request.

(8) Any person owning or operating a unit subject to this rule complying with Table 1 using pounds per million BTU, shall install and maintain in

service non-resettable, totalizing, fuel meters for each unit's fuel(s) prior to the compliance determination specified in paragraph (c)(3). Owners or operators of a unit with a combustion system that operates at only one firing rate that comply with an emission limit using pounds per million BTU shall install a non-resettable, totalizing, time or fuel meter for each fuel.

(9) Meters that require electric power to operate shall be provided a permanent supply of electric power that cannot be unplugged, switched off, or reset except by the main power supply circuit for the building and associated equipment or the unit's safety shut-off switch. Any person operating a unit subject to this rule shall not shut off electric power to a unit meter unless the unit is not operating and is shut down for maintenance or safety.

(10) On or before the compliance date, the owner or operator of a unit shall demonstrate compliance with the applicable emission limit in Table 1 pursuant to the provisions of subdivisions (d) or (e).

(11) Compliance by Certification

For units that do not allow adjustment of the fuel and combustion air for the combustion system by the owner or operator, and upon approval by the Executive Officer, an owner or operator may demonstrate compliance with the emission limit and demonstration requirement of this subdivision by certification granted to the manufacturer for any model of equipment sold for use in the District. Any unit certified pursuant to subdivision (e) shall be deemed in compliance with the emission limit in Table 1 and demonstration requirement of this subdivision, unless a District source test shows non-compliance.

(12) Identification of Units

(A) New Manufactured Units

The manufacturer shall display the model number and the rated heat input capacity of the unit complying with subdivision (c) on a permanent rating plate. The manufacturer shall also display the District certification status on the unit when applicable.

(B) Modified Units

The owner or operator of a unit with a modified combustion system (new or modified burners) shall display the new rated heat input capacity on a new permanent supplemental rating plate installed in an accessible location on the unit or burner. The gross

heat input shall be based on the maximum fuel input corrected for fuel heat content, temperature and pressure. Gross heat input shall be demonstrated by a calculation based on fuel consumption recorded by an in-line fuel meter by the manufacturer or installer.

(13) The owner or operator shall maintain on site a copy of all documents identifying the unit's rated heat input capacity for as long as the unit is retained on-site. The rated heat input capacity shall be identified by a manufacturer's or distributor's manual or invoice and a permanent rating plate attached to the unit. If a unit is modified, the rated heat input capacity shall be calculated pursuant to subparagraph (c)(12)(B). The documentation of rated heat input capacity for modified units shall include the name of the company and person modifying the unit, a description of all modifications, the dates the unit was modified and calculation of rated heat input capacity. The documentation for modified units shall be signed by the highest ranking person modifying the unit.

(14) Alternate Compliance Plans

(A) Owners or operators of facilities with five or more in-use units with permit emissions greater than one pound per day NOx that will require burner modifications may submit an alternate compliance plan by January 1, 2012 to phase-in compliance of all units starting April 1, 2012 and ending before January 1, 2015. The alternate compliance plan shall identify the units included in the plan and a schedule identifying when each unit will comply with the emission limit and the compliance determination for each unit will be completed. At least one unit shall be modified to comply with the applicable emission limit of this rule by April 1, 2012. Each year thereafter, a minimum of 20 percent of additional units and no less than one unit shall be modified to comply with the applicable emission limit. All units must comply with the applicable emission limit of this rule before January 1, 2015.

(B) Owners or operators of facilities with pollution control unit(s) in series with process unit(s) (e.g., an oven and afterburner) that have NOx emissions greater than one pound per day and different compliance dates may elect to synchronize compliance of all units in the series on one date no later than December 1, 2013.

(d) Compliance Determination

(1) All compliance determinations pursuant to paragraph (c)(6) shall be calculated:

(A) Using a District approved test protocol averaged over a period of at least 15 and no more than 60 consecutive minutes;

(B) After unit start up; and

(C) In the unit's as-found operating condition.

Each compliance determination shall be made in the maximum heat input range at which the unit normally operates. An additional compliance determination shall be made using a heat input of less than 35% of the rated heat input capacity for any of the following types of units with process temperature less than 1200 °F that operate with variable heat input that falls below 50% rated heat input capacity during normal operation: Make-Up Air Heater, other Air Heater located outside of process building, Oven, Dehydrator, Dryer, Tenter-Frame Dryer, Fabric Dryer, Carpet Dryer, Heater, Cooker, Roaster, non-metallurgical Furnace, or Heated Storage Tank.

For compliance determinations after the initial approved test, the operator is not required to resubmit a protocol for approval if: there is a previously approved protocol and the unit has not been altered in a manner that requires a permit alteration; and rule or permit emission limits have not changed since the previous test.

(2) All parts per million emission limits specified in subdivision (c) are referenced at 3 percent volume stack gas oxygen on a dry basis.

(3) Compliance with the NO_X emission limits of subdivision (c) and determination of stack-gas oxygen and carbon dioxide concentrations for this rule shall be determined according to the following procedures:

(A) District Source Test Method 100.1 – Instrumental Analyzer Procedures for Continuous Gaseous Emission Sampling (March 1989); or

(B) ASTM Method D6522-00 – Standard Test Method for Determination of Nitrogen Oxides, Carbon Monoxide, and Oxygen Concentrations in Emissions from Natural Gas-Fired Reciprocating

Engines, Combustion Turbines, Boilers, and Process Heaters Using Portable Analyzers; or

(C) United States Environmental Protection Agency Conditional Test Method CTM-030 – Determination of Nitrogen Oxides, Carbon Monoxide, and Oxygen Emissions from Natural Gas-Fired Engines, Boilers and Process Heaters Using Portable Analyzers; or

(D) District Source Test Method 7.1 – Determination of Nitrogen Oxide Emissions from Stationary Sources (March 1989); and

(E) District Source Test 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

(F) Any alternative test method determined approved before the test in writing by the Executive Officers of the District, the California Air Resources Board and the United States Environmental Protection Agency.

(4) For any operator who chooses to comply using pound per million Btu, 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.

(5) Records of source tests shall be maintained for ten years and made available to District personnel upon request. Emissions determined to exceed any limits established by this rule through the use of any of the test methods specified in subparagraphs (d)(3)(A) through (d)(3)(F) shall constitute a violation of this rule.

(6) All compliance determinations shall be made using an independent contractor to conduct testing, which is approved by the Executive Officer under the Laboratory Approval Program for the applicable test methods.

(7) For equipment with two or more units in series or multiple units with a common exhaust or units with one dual purpose burner that both heats the process and incinerates VOC, toxics or PM, the owner or operator may demonstrate compliance with the emission limits in Table 1 by one of the following:

(A) Test each unit separately and demonstrate each unit's compliance with the applicable limit, or

(B) Test only after the last unit in the series and at the end of a common exhaust for multiple units or dual purpose burner, when all units are operating, and demonstrate that the series of units either meet:

(i) The lowest emission limit in Table 1 applicable to any of the units in series, or

(ii) A heat input weighted average of all the applicable emission limits in Table 1 using the following calculation.

$$\textbf{Weighted Limit} = \frac{\Sigma\,[\,(EL_X)*(Q_X)\,]}{\Sigma\,[\,Q_X\,]}$$

Where:

EL_X = emission limit for unit X

Q_X = total heat input for unit X during test

(e) Certification

(1) Unit Certification

For units that do not allow adjustment of the fuel and combustion air for the combustion system by the owner or operator, any manufacturer or distributor that distributes for sale or sells units or burner systems for use in the District may elect to apply to the Executive Officer to certify such units or burner systems as compliant with subdivision (c).

(2) Manufacturer Confirmation of Emissions

Any manufacturer's application to the Executive Officer to certify a model of equipment as compliant with the emission limit and demonstration requirement of subdivision (c) shall obtain confirmation from an independent contractor that is approved by the Executive Officer under the Laboratory Approval Program for the necessary test methods prior to applying for certification that each unit model complies with the applicable requirements of subdivision (c). This confirmation shall be based upon District approved emission tests of standard model units and a

District approved protocol shall be adhered to during the confirmation testing of all units subject to this rule. Emission testing shall comply with the requirements of paragraphs (d)(1) through (d)(5) except emission determinations shall be made at 100% rated heat input capacity and an additional emission determination shall be made using a heat input of less than 35% of the rated heat input capacity for any Afterburner, Degassing Unit, Remediation Unit, Thermal Oxidizer, Catalytic Oxidizer, Vapor Incinerator, Make-Up Air Heater, other Air Heater located outside of process building, Oven, Dehydrator, Dryer, Tenter-Frame Dryer, Fabric Dryer, Carpet Dryer, Heater, Kiln, Crematory, Incinerator, Calciner, Cooker, Roaster, non-metallurgical Furnace, or Heated Storage Tank.

(3) When applying for unit(s) certification, 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 by the manufacturer's responsible official and shall attest to the accuracy of all statements;

(B) General Information

(i) Name and address of manufacturer,

(ii) Brand name, if applicable,

(iii) Model number, as it appears on the unit rating plate; and

(iv) Rated Heat Input Capacity, gross output of burner(s) and number of burners;

(C) A description of each model being certified; and

(D) A source test report verifying compliance with the applicable emission limit in subdivision (c) for each model to be certified. The source test report shall be prepared by the confirming independent contractor and shall contain all of the elements identified in the District approved Protocol for each unit tested. The source test shall have been conducted no more than ninety (90) days prior to the date of submittal to the Executive Officer.

(4) When applying for unit certification, the manufacturer shall submit the information identified in paragraph (e)(3) no more than ninety (90) days after the date of the source test identified in subparagraph (e)(3)(D) and at least 120 days prior to the date of the proposed sale and installation of any District certified unit.

(5) The Executive Officer shall certify a unit model which complies with the provisions of subdivision (c) and of paragraphs (e)(2), (e)(3), and (e)(4).

(6) Certification status shall be valid for five years from the date of approval by the Executive Officer. After the fifth year, recertification shall be required by the Executive Officer according to the requirements of paragraphs (e)(2), (e)(3), and (e)(4).

(f) Enforcement

(1) The Executive Officer may inspect certification records and unit installation, operation, maintenance, repair, combustion modification and test records of owners, operators, manufacturers, distributors, retailers, and installers of units located in the District, and conduct such tests as are deemed necessary to ensure compliance with this rule. Tests shall include emission determinations, as specified in paragraph (d)(1) to (d)(4), of a random sample of any category of units subject to this rule.

(2) An emission determination specified under paragraph (f)(1) that finds emissions in excess of those allowed by this rule or permit conditions shall constitute a violation of this rule.

(g) Exemptions

(1) The provisions of this rule shall not apply to units:

(A) subject to the nitrogen oxide limits of District Rules 1109, 1110.2, 1111, 1112, 1117, 1121, 1134, 1135, 1146, 1146.1, or 1146.2; or

(B) located at RECLAIM facilities.

(2) The provisions of this rule shall not apply to charbroilers.

(3) The provisions of this rule shall not apply to:

(A) Flares subject to District Rule 1118;

(B) Flares, afterburners, degassing units, thermal or catalytic oxidizers or vapor incinerators in which a fuel, including but not limited to natural gas, propane, butane or liquefied petroleum gas, is used only to maintain a pilot for vapor ignition or is used for five minutes or less to bring a unit up to operating temperature;

(C) Municipal solid waste incinerators with a District permit operating before December 5, 2008;

(D) An afterburner or vapor incinerator with a District permit operating before December 5, 2008 that has an integrated thermal fluid heat

exchanger that captures heat from the afterburner or vapor incinerator and an oven or furnace exhaust in order to reduce fuel consumption by an oven or the afterburner or vapor incinerator; or

(E) A flare, afterburner, degassing unit, remediation unit, thermal oxidizer, catalytic oxidizer or vapor incinerator process in which a fuel, including but not limited to natural gas, propane, butane or liquefied petroleum gas, is mixed with air toxics, VOCs, landfill gas, digester gas or other combustible vapors prior to incineration in the unit, in order to maintain vapor concentration above the upper explosion limit or above a manufacturer specified limit in order to maintain combustion or temperature in the unit. This exemption does not apply to a burner with a separate fuel line used to heat up or maintain temperature of a unit or incinerate air toxics, VOCs or other combustible vapors in a gas stream moving past the burner flame.

(4) New afterburners, degassing units, thermal oxidizers, catalytic oxidizers, vapor incinerators, and spray booth make-up air heaters installed for use at a specific facility after December 5, 2008 and before March 1, 2012, are exempt from the emission limit in Table 1 until July 1 of the year the unit is 15 years old.

(5) New or relocated remediation units installed after December 5, 2008 and before March 1, 2012, are exempt from the emission limit in Table 1 until a combustion modification or change of location on or after January 1, 2012.

(6) New food ovens, fryers, heated process tanks, parts washers, and evaporators installed after December 5, 2008 and operating before January 1, 2014, are exempt from the emission limit in Table 1 until July 1 of the year the unit is 15 years old.

(7) Remediation units are exempt from the applicable emission limit in Table 1 while fueled with propane, butane or liquefied petroleum gas in a location where natural gas is not available. Remediation units must comply with the emission limit when natural gas is available and while fueled with natural gas.

(h) Technology Assessment

(1) On or before December 7, 2015, the Executive Officer shall conduct a technology assessment and shall report to the Governing Board on the availability of burner systems and units for processes with NOx emissions of one pound per day or less.

(i) Mitigation Fee Compliance Option

(1) An owner or operator of a unit with emissions of more than 1 pound per day may elect to delay the applicable compliance date in Table 2 of paragraph (c)(1) or (c)(4) three years by submitting an alternate compliance plan and paying an emissions mitigation fee to the District in lieu of meeting the applicable NOx emission limit in Table 1.

(2) Compliance Demonstration

An owner or operator of a unit electing to comply with the mitigation fee compliance option shall:

(A) Submit an alternate compliance plan and pay the mitigation fee to the Executive Officer at least 150 days prior to the applicable compliance date in Table 2 of paragraph (c)(1) or (c)(4), and

(B) Maintain on-site a copy of verification of mitigation fee payment and AQMD approval of the alternate compliance plan that shall be made available upon request to AQMD staff.

(3) Plan Submittal

The alternate compliance plan submitted pursuant to paragraphs (i)(1) and (i)(2) shall include:

(A) A completed AQMD Form 400A with company name, AQMD Facility ID, identification that application is for a compliance plan (section 7 of form), and identification that request is for the Rule 1147 mitigation fee compliance option (section 9 of form);

(B) Attached documentation of unit fuel use for previous 5 years, description of weekly operating schedule, unit permit ID, unit heat rating (Btu/hour), and fee calculation;

(C) Filing fee payment; and

(D) Mitigation fee payment as calculated by Equation 1.

Equation 1:

$MF = R \times (3 \text{ years}) \times (L_1 - L_0) \times (AF) \times (k)$

Where,

MF = Mitigation fee, $

R = Fee Rate = $12.50 per pound ($6.25 per pound for a small business with 10 or fewer employees and gross annual receipts of $500,000 or less)

L_1 = Default NOx emission factor, 0.136 lbs of NOx/mmBtu for natural gas and LPG, and 0.160 lb/mmBtu for fuel oils

L_0 = Applicable NOx emission limit specified in Table 1 in lbs/mmBtu

AF = Annual average fuel usage of unit for previous 5 years, mmscf/yr for natural gas or gallons for liquid fuel

k = unit conversion for cubic feet of natural gas to Btu = 1,050 Btu/scf, 95,500 Btu/gallon for LPG, and 138,700 Btu/gallon for fuel oil

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

(Adopted November 5, 1982)

RULE 1148. THERMALLY ENHANCED OIL RECOVERY WELLS

(a) Definitions

1. OPERATE means to perform any activity with or on any crude oil production well including, but not limited to pumping, venting, maintaining, or repairing.

2. 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.

3. PRODUCTION ZONE means a formation or group of formations of oil bearing material beneath the surface of the ground through which steam can travel from a steam injection well to an oil production well.

4. STEAM DRIVE WELL means any crude oil production well that is completed in the same production zone as is a steam injection well, that is either operated by the person injecting the steam or responding to steam injection under a contractual agreement with the operator of the steam injection well, and that is within a:

   (A) 250 foot radius of the steam injection well, if the steam injection well is within a 2-1/2 acre or smaller production well pattern; or

   (B) 350 foot radius of the steam injection well, if the steam injection well is within a production well pattern of 5 acres or smaller but larger than 2-1/2 acres; or

   (C) 500 foot radius of the steam injection well, if the steam injection well is within a production well pattern larger than 5 acres; or

   (D) 1,000 foot radius of the steam injection well, if the production well is not in one of the above specified patterns.

5. STEAM INJECTION WELL is a well into which steam is injected to increase the production of oil from adjacent wells.

6. CYCLIC STEAM WELL is any producing well in which steam is injected and production resumes after a soaking period.

7. BEING SERVICED means being maintained, inspected, repaired and/or adjusted.

(b) Requirements

1. No person shall operate a steam drive well unless the ROG emissions from the well are 4.5 pounds per day or less; or

2. If steam drive wells are connected to a vapor control system, ROG emissions from the control system shall average no more than 4.5 pounds per day per connected well.

(c) Compliance

1. The operator of any new steam drive well, or any non-steam drive well converted to a steam drive well, who begins drive operations on or after the date of adoption of this rule shall comply with the provisions of this rule not later than 12 months after steam injection commences.

2. The operator of any oil production well operated as a steam drive well prior to the date of adoption of this rule:

   (A) Shall be in full compliance with the provisions of this rule by 19 months after adoption of this rule; and

   (B) For any operator who chooses to control the emissions from the well by installing a vapor control system shall comply with the following schedule of increments of progress:

      (i) Upon adoption of this rule, submit to the Executive Officer a final control plan which describes, as a minimum the steps, including construction schedules, that will be taken to achieve compliance with the provisions of this rule and an application for authority to construct the proposed vapor control system.

      (ii) Three months after adoption of this rule, provide documentation to the Executive Officer that contracts or purchase orders for the control system and component parts have been issued.

      (iii) Nine months after adoption of this rule, initiate on-site construction or installation of the vapor control system.

      (iv) Seventeen months after adoption of this rule, complete on-site construction of the vapor control system.

      (v) Nineteen months after adoption of this rule, demonstrate full compliance with the provisions of this rule.

3. Compliance testing shall be performed annually by the operator of vapor control systems used to control emissions from steam drive wells. The testing shall be performed during June, July, August, or September of each year. The operator shall notify the Executive Officer thirty days before testing begins and shall have a record of tests available, upon request by the Executive Officer, not later than thirty days after the completion of the tests.

(d) Exemptions

1. The Executive Officer may allow an exemption from the requirements of this rule for any steam drive well during the times that the well-head is opened to the atmosphere when the well is being serviced.

2. Any steam drive well defined by subparagraph (a)(4)(D) is exempt from the provisions of this rule if the operator shows to the satisfaction of the Executive Officer that the temperature at the well-head of produced oil and water has been increased by less than thirty Fahrenheit degrees (16.7 Celcius degrees) above the temperature at the well-head of oil and water that was produced before steam injection was commenced.

3. Any steam drive well defined by subparagraph (a)(4)(D) into which steam has been injected is exempt from the provisions of this rule for six months from the most recent date of such steam injection, provided that the amount of steam expressed as water injected during the most recent injection is more than 2,000 barrels and that:

   (A) Steam is injected more frequently than once every 45 days; or

   (B) For such wells that are steamed less frequently than once every 45 days, there is no visible vapor plume when the casing vent is open and the ambient air temperature is sixty degrees Fahrenheit (33.3 Celcius degrees) or greater, 45 days after steam injection has ceased; and

   (C) Records are made available, upon request, to the Executive Officer of:

      (i) date of injection;

(ii) the amount of steam injected expressed as volume of water.

4. Any vapor control system and connected steam drive wells are exempt from subsection (c)(3) if the requirements of (b)(2) have initially been met and the ROG leaving the system is vented into a fuel gas or other approved gas gathering system.

(Adopted December 4, 1987)(Amended April 1, 1988)(Amended July 14, 1995)
(Amended May 2, 2008)

RULE 1149. STORAGE TANK AND PIPELINE CLEANING AND DEGASSING

(a) Purpose and Applicability

The purpose of this rule is to reduce Volatile Organic Compounds (VOCs) and toxics emissions from roof landings, cleaning, maintenance, testing, repair and removal of storage tanks and pipelines. This rule applies to the cleaning and degassing of a pipeline opened to atmosphere outside the boundaries of a facility, stationary tank, reservoir, or other container, storing or last used to store VOCs.

(b) Definitions

(1) CLEANING is the process of washing or rinsing a stationary tank, reservoir, pipelines, or other container or removing vapor, sludge, or rinsing liquid from a stationary tank, reservoir, or other container.

(2) DEGASSING is the process of removing organic gases from a stationary tank, reservoir, pipelines, or other container.

(3) DRAIN-DRY BREAKOUT TANK is an above ground storage tank designed such that the floating roof rests on support legs no higher than one foot along the tank shell with a bottom sloped to a sump or sumps such that no product or sludge remains on the tank bottom and walls after emptying except clingage and is primarily used to receive product from pipelines and to distribute product back into pipelines.

(4) EXEMPT COMPOUNDS are defined in Rule 102 -- Definition of Terms.

(5) FACILITY means any source or group of sources or other air contaminant-emitting activities that 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 by the same person (or by persons under common control).

(6) LIQUID BALANCING is a process in which an organic liquid having a Reid vapor pressure subject to this rule is replaced in a floating roof storage tank by an organic liquid with a Reid vapor pressure that is not subject to this rule without landing the floating roof on its internal supports.

(7) LIQUID LEAK is the dripping of liquid VOC at the rate of more than three drops per minute.

(8) NATURAL GAS is a mixture of hydrocarbons, with at least 80 percent methane by volume and less than 10 percent by weight VOC, determined according to the test method specified in paragraph (d)(3).

(9) REID VAPOR PRESSURE (RVP) is the vapor pressure of a product determined in a volume of air four times greater than the liquid volume at 100° F.

(10) VAPOR LEAK is the detection of gaseous volatile organic compounds in excess of 5,000 ppmv, measured as methane.

(11) VAPOR TIGHT CONDITION is a condition that exists when the reading on a portable hydrocarbon analyzer is less than 500 parts per million (ppm), measured as methane, above background, measured using EPA Reference Method 21.

(12) VOLATILE ORGANIC COMPOUND (VOC) is as defined in Rule 102.

(c) Requirements

(1) A stationary tank, reservoir, or container of equal or greater capacity and containing or last containing any organic liquid with a vapor pressure equal or greater than in Table 1 shall not be opened to the atmosphere unless the emissions are controlled by one of the following:

(A) Liquid balancing; or

(B) Other control techniques such that the gaseous VOC concentration within the tank, reservoir or other container is reduced to less than 5,000 ppmv, measured as methane, for at least one hour after degassing operations have ceased.

Table 1
Capacity and Vapor Pressure Rule Applicability

Capacity gallons (liters)	Vapor Pressure (RVP)
500 (1,893)	3.9 psia
26,420 (100,000)	2.6 psia
100,000 (378,500)	0.5 psia

(2) The roof of a floating storage tank containing or last containing a VOC liquid with a Reid vapor pressure greater than 25 mm Hg (0.5 psi) may not rest upon its support legs after it has been emptied unless emissions are controlled by one of the following:

(A) The vapor space created is vented to a control device approved by the Executive Officer; or

(B) The gaseous VOC concentration within the tank, reservoir or other container is reduced to less than 5,000 ppmv, measured as methane, for at least one hour after degassing operations have ceased.

(3) In lieu of meeting the requirements of paragraph (c)(2), drain-dry breakout tanks shall be maintained in a vapor tight condition outside the tank shell while the roof is resting upon its support legs and shall be monitored monthly. Records shall be maintained pursuant to paragraph (c)(11). Owners or operators of facilities requiring tank modifications to meet the drain-dry breakout tank definition and utilize this compliance option shall make the modifications according to the following schedule:

(A) At least 1/4 of the tanks subject to this provision by August 1, 2009;

(B) At least 1/2 of the tanks subject to this provision by August 1, 2010;

(C) At least 3/4 of the tanks subject to this provision by August 1, 2011; and

(D) All tanks subject to this provision by August 1, 2012.

By August 1, 2008, an owner or operator shall submit to the District a compliance plan identifying the applicable tanks and the schedule for modification completion. Applicable tanks shall be maintained in a vapor tight condition outside the tank shell while resting upon its support legs and monitored monthly.

(4) Effective June 1, 2008, pipelines with a diameter of 6 inches or greater containing or last containing a VOC liquid with a Reid vapor pressure greater than 134 mm Hg (2.6 psi) shall not be opened to the atmosphere unless emissions are controlled by one of the following:

(A) The vapor space created is vented to a control device approved by the Executive Officer; or

(B) The gaseous VOC concentration within the pipeline is reduced to less than 5,000 ppmv, measured as methane, for at least one hour after degassing operations have ceased; or

(C) The gaseous VOC concentration outside the pipeline, as measured pursuant to paragraph (d)(1) while the pipeline is open, is less than 5,000 ppmv, measured as methane.

The process of removing liquid from pipelines shall be continuous and the liquid shall be immediately transferred into a container that meets the requirements of paragraph (c)(9). During the liquid removal process, the gaseous VOC concentration standard stated in paragraph (c)(4) will not apply.

(5) Equipment used in the cleaning or degassing process shall be free of liquid and vapor leaks. This includes, but is not limited to: the degassing equipment, vacuum truck, pumps, hoses, and connections.

(6) Effective June 1, 2008, vacuum trucks used to remove liquid, sludge or vapors from tanks or pipelines subject to this rule shall not exhaust vapors to the atmosphere greater than 500 ppmv, measured as methane. Until January 1, 2009, this provision will not apply after the tank or pipeline has met the requirements of paragraphs (c)(1), (c)(3) or (c)(4).

(7) The District shall be notified of the intent to degas any tank or pipeline subject to the rule. Initial notifications shall be submitted in a written format approved by the Executive Officer at least two (2) hours and no more than two (2) days prior to the start of the degassing operation. The initial notification shall include:

(A) Start date and time;

(B) Tank or pipeline owner, address, tank location and applicable tank permit numbers;

(C) Degassing operator's name, contact person, telephone number and applicable control equipment permit numbers; and

(D) Tank or pipeline capacity, volume of space degassed and materials stored.

A follow-up notification, using a form approved by the Executive Officer which is fully completed, including associated notification fees, as set forth in Rule 301 – Permitting and Associated Fees, must be submitted to the District postmarked, received or delivered no later than three business days following the degassing activity.

(8) The VOC concentration in the exhaust stream of any control device shall be less than 500 ppmv, measured as methane. When carbon adsorption is used for degassing:

(A) An organic vapor monitor/analyzer approved by the Executive Officer or designee shall be installed and operated at any exit of the carbon adsorption device to determine the concentration of hydrocarbon discharged to the atmosphere.

(B) An owner or operator shall not regenerate any spent carbon from a carbon adsorber unless the regeneration is conducted using equipment operating under a valid permit to operate issued by the Executive Officer or designee.

(9) Any liquids or sludge removed from the tank or pipeline prior to the tank meeting the requirements of paragraphs (c)(1), (c)(3) or (c)(4), shall be handled or disposed of in closed containers that are free of liquid and vapor leaks or in a manner previously approved by the Executive Officer.

(10) A person engaged in the off-site cleaning or degassing of stationary storage tanks shall complete the cleaning and degassing operations in accordance with the requirements of subdivision (c) within 14 days of receiving the tanks.

(11) Records shall be maintained by the owner and operator for two (2) years, or five (5) years if the facility is a Title V facility, and be made available to the Executive Officer or designee upon request. The records shall include, but are not limited to:

(A) All notification requirements under paragraph (c)(7);

(B) Tank or pipeline owner, address and applicable tank permit numbers;

(C) Tank or pipeline degassing operator's name, contact person, telephone number and applicable control equipment permit numbers;

(D) Tank or pipeline capacity, volume of vapor space degassed and materials stored;

(E) The flow rate and gaseous VOC concentration vented to the degassing equipment, if applicable;

(F) The gaseous VOC concentration of the degassing equipment exhaust, if applicable;

(G) The total amount of VOC processed in the degassing equipment, if applicable; and

(H) All readings measured according to EPA Reference Test Method 21, as specified in subdivision (d).

(d) Test Methods

For the purpose of this rule, the following test methods shall be used.

(1) Measurement of gaseous VOC concentrations shall be conducted according to EPA Reference Method 21 using an appropriate analyzer calibrated with methane at a distance of 1 cm (0.4 inch) or less from the source. For pipelines, the probe inlet shall be located one foot away from the opening in the pipeline. When determining compliance with subparagraphs (c)(1)(B) or (c)(2)(B), the probe inlet of the monitoring instrument shall be located no more than 1 foot above the bottom of the tank or no more than 1 foot above the surface of the sludge material on the bottom of the tank. For upright, cylindrical aboveground tanks, the probe inlet shall be located at least 2 feet away from the inner surface of the tank wall.

(2) Reid vapor pressure is determined by ASTM D 323-90.

(3) The VOC content of gases shall be determined according to ASTM Method D 1945.

(e) Exemptions

(1) The provisions of this rule shall not apply to the degassing of less than 100 feet of a pipeline.

(2) The provisions of this rule shall not apply to the degassing of less than 0.25 miles of a pipeline that contained or previously contained any organic liquid having a Reid vapor pressure less than 202 mm Hg (3.9 psi).

(3) The provisions of subdivision (c) shall not apply to natural gas pipelines.

(4) The provisions of subdivision (c) shall not apply while connecting or disconnecting degassing equipment, sampling emissions, purging inert gas from pipelines when reintroducing product or while connecting or disconnecting pipelines and associated control techniques or control equipment.

(Adopted April 5, 1985)(Amended April 10, 1998)
(Amended March 17, 2000)(Amended April 1, 2011)

RULE 1150.1. CONTROL OF GASEOUS EMISSIONS FROM MUNICIPAL SOLID WASTE LANDFILLS

(a) Purpose

The purpose of this rule is to reduce non-methane organic compounds (NMOC), volatile organic compound (VOC) and toxic air contaminant (TAC) emissions from Municipal Solid Waste (MSW) landfills to prevent public nuisance and possible detriment to public health caused by exposure to such emissions. This rule also reduces methane emissions, a greenhouse gas.

(b) Applicability

This rule is applicable to any owner or operator of an active or inactive MSW landfill.

(c) Definitions

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

(1) ACTIVE COLLECTION SYSTEM as defined by 40 CFR 60.751 means a gas collection system that uses gas mover equipment.

(2) ACTIVE MSW LANDFILL means a Municipal Solid Waste landfill that has received solid waste on or after November 8, 1987.

(3) BACKGROUND means the local ambient concentration of total organic compounds (TOC) measured as methane determined by holding the instrument probe approximately 5 to 6 feet above the landfill surface.

(4) CLOSED MSW LANDFILL means a Municipal Solid Waste landfill that has ceased accepting solid waste for disposal and was conducted in accordance with all applicable federal, state and local statutes, regulations, and ordinances in effect at the time of closure.

(5) COMPONENT LEAK means the concentration of methane measured one half an inch or less from a component source that exceeds 500 parts per million by volume (ppmv), other than non-repeatable, momentary readings.

(6) COMPONENT means any equipment that is part of the gas collection system or gas control system and that contains landfill gas including, but

not limited to, wells, pipes, flanges, fittings, valves, flame arresters, knock-out drums, sampling pots, blowers, compressors, or connectors.

(7) CONSTRUCTION AND DEMOLITION WASTE means waste building materials, packing and rubble resulting from construction, remodeling, repair and demolition operations on pavements, houses, commercial building and other structures.

(8) CONTINUOUS OPERATION means that the gas collection and gas control systems are operated continuously, the existing gas collection wells are operating under vacuum while maintaining landfill gas flow, and the collected landfill gas is processed by a gas control system 24 hours per day.

(9) DESTRUCTION EFFICIENCY means a measure of the ability of a gas control device to combust, transform, or otherwise prevent emissions of methane from entering the atmosphere.

(10) ENCLOSED COMBUSTOR means an enclosed flare, steam generating boiler, internal combustion engine or gas turbine.

(11) ENERGY RECOVERY DEVICE means any combustion device that uses landfill gas to recover energy in the form of steam or electricity including, but not limited to gas turbines, internal combustion engines, boilers, and boiler-to-steam turbine systems.

(12) EXECUTIVE OFFICER means the Executive Officer or designee of the South Coast Air Quality Management District

(13) GAS COLLECTION SYSTEM means any system that employs various gas collection wells and connected piping and mechanical blowers, fans, pumps or compressors to create a pressure gradient and actively extract landfill gases.

(14) GAS CONTROL DEVICE means any device used to dispose of or treat collected landfill gas including, but not limited to, enclosed flares, open flares, internal combustion engines, boilers and boiler-to-steam systems, process heaters, fuel cells, and gas turbines.

(15) GAS CONTROL SYSTEM means any system that disposes of or treats collected landfill gas by one or more of the following means: combustion, gas treatment for subsequent sale, or sale for processing offsite, including for transportation fuel and injection into natural gas pipelines.

(16) INACTIVE MSW LANDFILL means a Municipal Solid Waste landfill that has not accepted solid waste after November 8, 1987 and

subsequently no further solid waste disposal activity has been conducted within the disposal facility.

(17) LANDFILL GAS means any untreated, raw gas derived through a natural process from the decomposition of organic waste deposited in a MSW landfill from the evolution of volatile species in the waste, or from chemical reactions of substances in the waste.

(18) LANDFILL SURFACE means the area of the landfill under which decomposable solid waste has been placed, excluding the working face.

(19) MUNICIPAL SOLID WASTE or MSW LANDFILL means an entire disposal facility in a contiguous geographical space where solid waste is placed in or on land. An MSW landfill may be active, inactive or closed.

(20) NON-DECOMPOSABLE SOLID WASTE means materials that do not degrade biologically to form landfill gases. Examples include, but are not limited to, earth, rock, concrete, asphalt, paving fragments, clay products, inert slag, asbestos-containing waste, and demolition material containing minor amounts (less than 10 percent by volume) of wood and metals. Materials that do not meet this definition are considered decomposable solid waste.

(21) NON-REPEATABLE MOMENTARY READINGS means indications of the presence of methane, total organic compounds, or toxic air contaminants, which persist for less than five seconds and do not recur when the sampling probe of a portable gas detector is placed in the same location.

(22) OPERATOR means the person:

(A) Operating the MSW landfill, or

(B) Operating the MSW landfill gas collection or gas control system.

(23) OWNER means the person holding title to the property.

(24) PASSIVE COLLECTION SYSTEM means a gas collection system that solely uses positive pressure within the landfill to move the gas rather than using gas mover equipment, or uses the natural pressure gradient established between the encapsulated waste and the atmosphere to move the gas through the collection system.

(25) PERIMETER means the outer boundary of the entire waste disposal property.

(26) PROFESSIONAL ENGINEER means an engineer holding a valid certificate issued by the State of California Board of Registration for

Professional Engineers and Land Surveyors or a state offering reciprocity with California.

(27) SOLID WASTE means all decomposable and non-decomposable solid, semisolid and liquid wastes including garbage, trash, refuse, paper, rubbish, ashes, industrial waste, manure, vegetable or animal solid and semisolid waste. Solid waste also includes any material meeting the definition of solid waste in 40 CFR 60.751 (as last amended by 64 Fed. Reg. 9262, Feb. 24, 1999), as incorporated by reference herein.

(28) SUBSURFACE GAS MIGRATION means underground landfill gases that are detected at any point on the perimeter, pursuant to California Code of Regulation Title 27, section 20921.

(29) TOXIC AIR CONTAMINANT (TAC) means 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 TAC 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.

(30) WASTE IN PLACE means the total amount of solid waste placed in an MSW landfill, estimated in tons. The refuse density is assumed to be 1,300 pounds per cubic yard and the decomposable fraction is assumed to be 70 percent by weight.

(31) WELL RAISING means a MSW landfill activity where an existing gas collection well is temporarily disconnected from a vacuum source; and the non-perforated pipe attached to the well is extended vertically to allow the addition of a new layer of solid waste or the final cover or is extended horizontally to allow extension of an existing layer of solid waste or cover material. The extended pipe is then reconnected to vacuum source in order to continue collecting gases from that well.

(32) WORKING FACE means that open area where solid waste is deposited daily and compacted with landfill equipment.

(d) Active Landfill Design and Operation Requirements

The MSW landfill owner or operator shall comply with the provisions of paragraphs (d)(1) through (d)(20):

(1) If a valid Permit to Construct or Permit to Operate for the gas collection and gas control systems that meets the requirements of subparagraphs (d)(1)(A) through (d)(1)(C) has not been issued by the District, the owner or operator shall submit a site-specific gas collection and gas control systems design plan. The design plan shall be prepared by a Professional Engineer and submitted to the Executive Officer with applications for Permits to Construct or Permits to Operate for the gas collection and gas control systems. The Executive Officer shall review the gas collection and gas control systems design and either approve it, disapprove it, or request that additional information be submitted. An approved design plan may be revised and submitted for review and approval by the Executive Officer. Revisions shall be prepared by a Professional Engineer.

(A) The gas collection and gas control systems shall be designed to handle the maximum expected gas flow rate from the entire area of the MSW landfill that requires control, to minimize migration of subsurface gas to comply with paragraph (d)(10), and to collect gas at an extraction rate to comply with paragraphs (d)(11) and (d)(12). For the purposes of calculating the maximum expected gas generation flow rate from the landfill, the 2006 Intergovernmental Panel on Climate Change Guidelines for National Greenhouse Gas Inventories, Chapter 3 (IPCC Model), using landfill gas capture factor of 75 percent shall be used. Any other method used to determine the maximum gas generation flow rate, must be submitted in writing and approved by the Executive Officer, prior to use.

(B) If a valid Permit to Construct or Permit to Operate has not been issued by the District for the gas collection and gas control systems, the gas collection and gas control systems design plan shall either conform with specifications for active collection systems in 40 CFR, Part 60, Section 60.759 or include a demonstration to the Executive Officer's satisfaction of the sufficiency of the alternative provisions describing the design and operation of the gas collection and gas control systems, the operating parameters that would indicate proper performance, and appropriate monitoring procedures. Alternatives to this rule shall be submitted as specified in subdivision (i).

(C) The design plan shall provide for the control of collected MSW landfill emissions through the use of gas collection and gas control systems meeting the applicable requirements in clauses (d)(1)(C)(i), (d)(1)(C)(ii), (d)(1)(C)(iii), and (d)(1)(C)(iv), or provide for the collection and subsequent sale of collected MSW landfill emissions as specified in clause (d)(1)(C)(v).

(i) Route all collected landfill gas to a gas control system designed to be operated continuously to reduce methane by at least 99 percent by weight and reduce NMOC by at least 98 percent by weight or reduce the outlet NMOC concentration to less than 20 parts per million by volume (ppmv), dry basis as hexane at 3 percent oxygen. The required reduction efficiency or ppmv shall be established by an initial source test, required under 40 CFR, Part 60, Section 60.8 and annually thereafter using the test methods specified in paragraph (j)(1). The annual source test shall be conducted no later than 45 days after the anniversary date of the initial source test.

(ii) If an enclosed flare is used as the gas control device, the following requirements shall be met:

(I) The enclosed flare shall achieve a methane destruction efficiency of at least 99 percent by weight.

(II) The enclosed flare shall be equipped with an automatic damper, an automatic shutdown device, a flame arrestor, and a continuous recording temperature sensor.

(III) During restart or startup, an enclosed flare shall have sufficient flow of propane or commercial natural gas to the burners to prevent unburned collected methane from being emitted to the atmosphere.

(IV) The enclosed flare shall be operated within the parameter ranges established during the initial or the most recent source test. The operating

parameters to be monitored are specified in paragraph (e)(7).

(iii) If an open flare is used as the gas control device, the following requirements shall be met:

(I) An open flare installed and operated prior to August 1, 2008 may operate until January 1, 2018.

(II) Operation of an open flare on or after January 1, 2018 may be allowed if the owner or operator can demonstrate to the Executive Officer that the landfill gas heat input capacity is less than 3.0 MMBtu/hr and is insufficient to support the continuous operation of an enclosed flare or other gas control device.

(III) The owner or operator seeking to temporarily operate an open flare during the maintenance or repair of a gas control system or while waiting for the installation on an enclosed flare or to offset gas mitigation issues must submit a written request to the Executive Officer and operate an open flare only after approval.

(iv) If a gas control device is an enclosed combustor other than a flare and is used as a gas control device, the following requirements shall be met:

(I) The gas control device shall achieve a methane destruction efficiency of at least 99 percent by weight. Lean burn combustion engines shall reduce the outlet methane concentration to less than 3,000 ppmv, dry basis, corrected to 15 percent oxygen.

(II) If a boiler or process heater is used as the gas control device, the landfill gas stream shall be introduced into the flame zone. Where the landfill gas is the primary fuel for the boiler or process heater, introduction of the landfill gas stream into the flame zone is not required.

(III) The gas control device shall be operated within the operating parameter ranges established during the

initial or most recent compliant source test. The operating parameters to be monitored are specified in paragraph (e)(7).

(v) Route the collection gas to a treatment system that processes the collection gas for subsequent sale or use. All emissions from any atmospheric vent from the gas treatment system shall be subject to requirements of clause (d)(1)(C)(i).

(2) New and Active MSW Landfills shall install and operate the gas collection and gas control systems no later than 18 months after the submittal of the design plan.

(3) Any owner or operator of existing gas collection and gas control systems who modifies those systems to meet the requirements of this rule shall submit for approval to the Executive Officer an amendment of the existing design plan to include any necessary updates or addenda. Design plan amendments shall be prepared by a professional engineer.

(4) The owner or operator of a closed or inactive landfill shall install and operate the gas collection and gas control systems no later than 30 months after the approval of the design plan.

(5) The owner or operator of an active MSW Landfill shall identify in their design plan the areas of the landfill that are closed or inactive.

(6) Any area of the landfill that contains asbestos-containing waste or non-decomposable solid waste may be excluded from collection provided that the owner or operator submits documentation to the Executive Officer regarding the nature of the material, and the date of its deposit in the area. This documentation may be included as part of the design plan.

(7) The design plan shall include a description of potential mitigation measures to be used to prevent the release of methane or other pollutants into the atmosphere during the installation or preparation of wells, piping, or other related components during repairs or the temporary shutdown of the gas collection system components; or to be used when solid waste is excavated and moved.

(8) The gas collection device and gas control systems shall be operated, maintained and expanded in accordance with the procedures and schedules set forth in the approved design plan.

(9) If the District has not issued prior written approval for subsurface refuse boundary sampling probes, the owner or operator shall design and install subsurface refuse boundary sampling probes as specified in Section 1.1 Attachment A, to determine whether landfill gas migration exists. Installation of the refuse boundary probes shall be no later than 18 months after the submittal of the gas collection and gas control systems design plan as specified in paragraph (d)(1).

(10) Operate the gas collection system to prevent the concentration of TOC measured as methane from exceeding five percent by volume in the subsurface refuse boundary sampling probes constructed for the purposes of detecting lateral migration of landfill gas away from the waste mass, as determined from collected samples.

(11) Operate the gas collection system to prevent the concentration of TOC measured as methane from exceeding 25 ppmv as determined by integrated samples taken on numbered 50,000 square foot landfill grids.

(12) Operate the gas collection system to prevent the concentration of TOC measured as methane from exceeding 500 ppmv above background as determined by instantaneous monitoring at any location on the landfill, except at the outlet of any gas control device.

(13) Operate the gas collection and gas control systems so that there are no leaks that exceed 500 ppmv TOC measured as methane at any component under positive pressure. Any component leak exceeding 500 ppmv must be tagged and repaired within 10 calendar days from the time of the first exceedance.

(14) Operate the gas collection and gas control systems at all times for landfills with an Active Collection System. In the event the gas collection or gas control systems are inoperable, the active collection systems shall be shut down and all valves in the gas collection and gas control systems contributing to venting of the gas to the atmosphere shall be closed no later than one hour after such breakdown or no later than one hour after the time the owner or operator knew or reasonably should have known of its occurrence.

(15) Operate the gas collection and gas control systems until all the exemption criteria under subdivision (k) have been met and the reports specified in subparagraph (f)(2)(D) have been submitted to the Executive Officer.

(16) Operate all Wellheads so the gauge pressure is under a constant vacuum (negative pressure), except under the following conditions:

(A) During wellhead raising: When a new fill is being added or compacted in the immediate vicinity around the well and once installed, while a gas collection well extension is sealed or capped until the raised well is reconnected to vacuum source.

(B) During repair and temporary shutdown of the gas collection system due to a catastrophic event, such as an earthquake, or to extinguish landfill fires; and as a result of these events, during repair efforts to connect new landfill gas collection system components to the existing gas collection system, and to do required permitted component connection for the gas collection system, and to perform permitted construction activities provided the following requirements are met:

(i) Any new gas collection system components required to maintain compliance with this subparagraph must be included in the most recent Design Plan pursuant to paragraph (d)(3).

(ii) Methane and other landfill gas emissions are minimized during shutdown pursuant to subdivision (d).

(17) Design, install, and operate a wind speed and direction monitoring system with a continuous recorder of the requirements in subparagraphs (d)(17)(A) and (d)(17)(B), at a site which is representative of the wind speed and direction in the areas being sampled. The wind velocity shall be recorded throughout the sampling period. The wind direction transmitter shall be oriented to true north using a compass.

(A) For wind speed use a 3 cup assembly, with a range of 0 to 50 miles per hour, with a threshold of 0.75 mile per hour or less.

(B) For wind direction, use a vane with a range of 0 to 540 degrees azimuth, with a threshold of plus-minus 2 degrees.

(18) Comply with the requirements of Section 21140 – Final Cover, of California Code of Regulations Title 27, Subchapter 5 – Closure and Post-Closure Maintenance, upon closure of a MSW landfill unit, incorporated herein as Attachment B.

(19) Comply with the requirement of Section 20200 – State Water Resources Conservation Board (SWRCB) Applicability and Classification Criteria of

California Code of Regulations Title 27, Article 2 – SWRCB, Waste Classification and Management, with respect to the disposal of liquids and semi-solid waste at Class III landfills, incorporated herein as Attachment C.

(20) Comply with the requirements of National Emissions Standards for Hazardous Air Pollutants (NESHAP) 40 CFR Part 63 Subpart AAAA, as applicable.

(e) Active Landfill Sampling and Monitoring Requirements

The MSW landfill owner or operator shall comply with the provisions of paragraphs (e)(1) through (e)(7), after installation of the landfill gas control system:

(1) Monitor and collect samples for analysis as specified in Section 1.0, Attachment A, to determine the concentrations of TOC and TAC each month from the subsurface refuse boundary sampling probes, to assure continued compliance. Any measurement of 5 percent TOC by volume or greater shall be recorded as an exceedance and the actions specified in subparagraphs (e)(1)(A) through (e)(1)(C) shall be taken.

(A) The probe shall be identified and the location recorded as specified in Section 1.6, Attachment A.

(B) Adjustments to the vacuum of adjacent wells to increase the gas collection in the vicinity of the probe with the exceedance, shall be made and the probe resampled no later than 10 calendar days after detecting the exceedance.

(C) If the resampling of the probe shows a second exceedance, additional corrective action shall be taken and the probe shall be resampled again no later than 10 calendar days after the second exceedance. If the resampling shows a third exceedance, it is a violation unless the owner or operator determines that a new or replacement gas collection well is needed. The owner or operator must install and operate the new or replacement well no later than 45 days after detecting the third exceedance.

(2) Collect monthly integrated samples for analysis as specified in Section 2.0, Attachment A, to determine the concentrations of TOC and TAC from the landfill surface, and to assure continued compliance. Any reading of

25 ppmv or greater shall be recorded as an exceedance and the actions specified in subparagraphs (e)(2)(A) through (e)(2)(C) shall be taken.

(A) The grid shall be identified and the location recorded as specified in Section 2.8, Attachment A.

(B) If the sample shows an exceedance, the gas collection equipment and the landfill cover shall be serviced to ensure the exceedance is repaired. If adjustments to the vacuum of adjacent wells are made to increase the gas collection in the vicinity of the grid with the exceedance resample the grid no later than 10 calendar days after detecting the exceedance. If measurable precipitation occurs within the 10 calendar days, all resamples and analysis shall comply with Section 2.2.2, Attachment A.

(C) If the resample of the grid shows a second exceedance, additional corrective action shall be taken and the grid shall be resampled again no later than 10 calendar days after the second exceedance. If the resample shows a third exceedance, it is a violation unless the owner or operator determines that a new or replacement gas collection well is needed. The owner or operator must install and operate the new or replacement well no later than 45 days after detecting the third exceedance.

(3) Instantaneous surface monitoring as specified in Section 3.0, Attachment A, shall be conducted to determine the concentration of TOC each calendar quarter, to assure continued compliance. Any reading of 500 ppmv TOC or greater other than non-repeatable momentary readings, shall be recorded as an exceedance and the actions specified in subparagraphs (e)(3)(A) through (e)(3)(C) shall be taken. Any closed or inactive MSW landfill that meets the definitions in (c)(4) or (c)(16) and has no observed monitoring readings that exceed 500 ppmv for the last four consecutive quarterly monitoring periods may, upon approval of the Executive Officer, monitor annually. Any reading of 500 ppmv TOC or more detected during the annual monitoring or an SCAQMD compliance inspection that cannot be remediated within 10 days shall result in a return to quarterly monitoring for the landfill.

(A) The location of each exceedance shall be clearly marked and identified on a topographic map of the MSW landfill or identified

by using a global positioning system and the location recorded as specified in Section 3.4, Attachment A.

(B) Corrective action must be taken by the owner or the operator, including, but not limited to one or more of the following: cover maintenance or repair, or well vacuum adjustments. The location shall be remonitored no later than 10 calendar days after detecting the exceedance.

(C) If the remonitoring of the location shows a second exceedance, additional corrective action shall be taken and the location shall be remonitored again no later than 10 days after the second exceedance. If the remonitoring shows a third exceedance, it is a violation unless the owner or operator determines that a new or replacement gas collection well is needed. The owner or operator must install and operate the new or replacement well no later than 45 days after detecting the third exceedance.

(4) Wellheads shall each be monitored monthly to determine the gauge pressure. If there is any positive pressure reading, other than as provided in subparagraphs (d)(16)(A) and (d)(16)(B), the owner or operator shall take the following actions:

(A) Initiate corrective action within 5 calendar days of the positive pressure measurement.

(B) If the problem cannot be corrected within 15 days of the first positive pressure measurement, the owner or operator must initiate further action, including but not limited to, any necessary expansion of the gas collection system to mitigate any positive pressure readings.

(C) All corrective actions, including any expansion of the gas collection and gas control systems, must be completed and any new wells must be in operation within 120 days of the date of the first positive pressure measurement.

(D) Determination of gauge pressure must be determined using a hand-held manometer, magnahelic gauge or other pressure measuring device approved by the Executive Officer. The device must be calibrated and operated in accordance with the manufacturer's specifications.

(5) Collect a monthly landfill gas sample for analysis as specified in Section 4.0, Attachment A, to determine the concentrations of TOC and TAC from the main gas collection header line entering any gas control systems.

(6) Collect monthly ambient air samples for analysis as specified in Section 5.0, Attachment A, to determine the concentrations of TOC and TAC from the landfill property boundary.

(7) Monitor the gas collection and gas control systems equipment specified under subparagraphs (e)(7)(A), (e)(7)(B) and (e)(7)(C) in order to comply with subparagraph (d)(1)(C).

(A) For enclosed combustors and enclosed flares, the following equipment must be installed, calibrated, maintained, and operated according to the manufacturer's specifications:

(i) A temperature monitoring device equipped with a continuous recorder and having an accuracy of plus-minus 1 percent of the temperature being measured expressed in degrees Celsius or Fahrenheit. A temperature monitoring device is not required for boilers or process heaters with design heat input capacity greater than 44 megawatts.

(ii) At least one gas flow rate measuring device that shall record the flow to the gas control device(s) at least every 15 minutes.

(B) For open flares and other non-combustion systems, demonstrate compliance with subparagraph (d)(1)(C) by providing information satisfactory to the Executive Officer describing the operation of the gas control device, the operating parameters that would indicate proper performance, and appropriate monitoring procedures. Alternatives to this rule shall be submitted as specified in subdivision (i). The Executive Officer may specify additional appropriate monitoring procedures.

(C) All components containing landfill gas that are under positive pressure shall be monitored for leaks on a quarterly basis. Any component leak must first be tagged and then repaired within 10 calendar days. Component leak testing at MSW landfills having landfill gas-to-energy facilities may conduct testing for leaks prior to scheduled maintenance or during planned outage periods.

(f) Active Landfill Recordkeeping and Reporting Requirements

The MSW landfill owner or operator shall keep all records on paper, electronic or in other suitable data formats approved by the Executive Officer, kept up-to-date, readily accessible and maintained for at least a period of 5 years. Such records shall be made available to the Executive Officer upon request. Records older than 2 years may be maintained off-site, if they are retrievable no later than 4 hours after request.

(1) The records required in subparagraphs (f)(1)(A) through (f)(1)(L) shall be maintained and be accessible by the facility.

(A) For the life of the gas control system, as measured during the initial source test or compliance determination:

(i) The gas control device vendor specifications.

(ii) The maximum expected gas generation flow rate as calculated pursuant to subparagraph (d)(1)(A).

(iii) When demonstrating compliance with subparagraph (d)(1)(C) through the use of an enclosed combustion device other than a boiler or process heater with a design heat input capacity greater than 44 megawatts:

(I) The average combustion temperature measured at least every 15 minutes and averaged over the same time period of the source test.

(II) The reduction of NMOC and the reduction of methane determined as specified in clause (d)(1)(C)(i) achieved by the gas control device.

(iv) When demonstrating compliance with subclause (d)(1)(C)(i) through the use of a boiler or process heater of any size: a description of the location at which the collected gas vent stream is introduced into the boiler or process heater and is established during the initial or most recent source test.

(v) When demonstrating compliance with subparagraph (d)(1)(A) though the use of a non-enclosed combustion device, the owner or operator shall maintain records of measurement from the initial source test and from each annual performance test as specified in 40 CFR 60.18. If the combustion device is an open flare, the owner or

operator shall maintain records of the flare flame monitoring and records of all periods of operation during which the pilot flame of the flare is absent.

(B) The data required to be recorded under Section 1.6, Attachment A, for subsurface refuse boundary sampling probes and all remedial actions taken for exceedances of the 5 percent TOC standard required in paragraph (d)(10) and all actions taken and recorded to comply with Title 27 sec. 20937 (a)(2)(B)(i) through (a)(2)(B)(iv).

(C) The data required to be recorded under Section 2.8, Attachment A, for integrated samples and all remedial actions taken for exceedances of the 25 ppmv TOC standard required in paragraph (d)(11).

(D) The data required to be recorded under Section 3.4, Attachment A, for instantaneous monitoring and all remedial actions taken for exceedances of the 500 ppmv TOC standard required in paragraph (d)(12). Instantaneous monitoring exceedances from 200 to 499 ppmv shall also be recorded but remedial action is not required.

(E) The data required to be recorded under Section 4.5, Attachment A, for landfill gas samples collected from the main gas collection header line entering the gas treatment and/or gas control systems.

(F) The data required to be recorded under Section 5.7, Attachment A, from ambient air collected at the landfill property boundary.

(G) A description and the duration of all periods when the gas collection or gas control system was not operating for a period exceeding one hour and the length of time the system was not operating.

(H) During construction that requires exposing solid waste material to the atmosphere, the following records are required:

(i) A description of actions taken, the affected area of the MSW Landfill, the reason the actions are required and a list of the landfill gas collection system components affected by actions;

(ii) Construction start and finish dates, projected equipment installation dates, and projected shut down times for individual gas collection system components; and

(iii) A description of the mitigation measures taken to minimize methane emissions and other potential air quality impacts during the construction period.

(I) All records pertaining to solid waste acceptance, solid waste acceptance rate, and the current amount of waste in place.

(J) All records pertaining to non-degradable waste acceptance, including the nature, location, amount, and the deposition for any landfill area excluded from the gas collection system.

(K) All records of positive wellhead gauge pressure measurements, the date of the measurements, the well identification number, and the corrective action taken.

(L) Continuous records of the equipment operating parameters specified to be monitored under paragraph (e)(7) as well as records for periods of operation during which the parameter boundaries established during the most recent source test are exceeded.

(i) The following constitute exceedances that shall be recorded:

(I) For enclosed combustors except for boilers and process heaters with design heat input capacity of 44 megawatts (150 million British thermal unit per hour) or greater, all 3-hour periods of operation during which the average combustion temperature was more than 28° C (82° F) below the average combustion temperature during the most recent source test at which compliance with subparagraph (d)(1)(C) was determined.

(II) For boilers or process heaters, whenever there is a change in the location at which the vent stream is introduced into the flame zone as required under clause (f)(1)(A)(iv).

(ii) Records of the indication of flow to the gas control device specified in clause (e)(7)(A)(ii).

(iii) Each owner or operator who uses a boiler or process heater with a design heat input capacity of 44 megawatts or greater to comply with subparagraph (d)(1)(C) shall keep records of all periods of operation of the boiler or process

heater. (Examples of such records could include records of steam use, fuel use, or monitoring data collected pursuant to other State, local, Tribal, or Federal regulatory requirements.)

(2) The reports required in subparagraphs (f)(2)(A) through (f)(2)(D) shall be submitted to the Executive Officer.

(A) The initial source test report no later than 180 days after start-up and each succeeding complete annual source test report no later than 45 days after the anniversary date of the initial source test, for all gas control systems required in subparagraph (d)(1)(C).

(B) A report no later than 45 days after the last day of each calendar quarter with the information required in clauses (f)(2)(B)(i) and (f)(2)(B)(ii).

(i) All exceedances of the emission standards required in paragraphs (d)(10), (d)(11) and (d)(12) in the format required under Sections 1.6, 2.8 and 3.4, Attachment A. All exceedances resampled/remonitored and each corrective action required under paragraphs (e)(1), (e)(2) and (e)(3). If there are no exceedances, submit a letter stating there were no exceedances for that quarter.

(ii) All TAC analyses required in paragraphs (e)(1) through (e)(6).

(C) Any owner or operator of a MSW landfill which has ceased accepting waste shall submit a closure report to the Executive Officer no later than 30 days after waste acceptance cessation. The report should include the last day solid waste was accepted, the projected date of closure for the MSW Landfill, and the estimated amount of waste-in-place. The Executive Officer may request additional information as may be necessary to verify that permanent closure has taken place in accordance with the requirements of 40 CFR, Part 258, Section 258.60 or the applicable federal, state and local statutes, regulations, and ordinances in effect at the time of closure. If a closure report has been submitted to the Executive Officer, no additional wastes shall be placed into the landfill without filing a notification of modification as described under 40 CFR, Part 60, Section 60.7(a)(4).

(D) Any owner or operator of a MSW landfill which has ceased operation of a gas collection or gas control system shall submit a decommissioning report to the Executive Officer 30 days prior to well capping, removal or cessation of operation of the collection, treatment or control equipment. The decommissioning report shall contain all of the items as specified in clauses (f)(2)(D)(i) through (f)(2)(D)(iii):

(i) A copy of the closure report submitted in accordance with subparagraph (f)(2)(C).

(ii) A copy of the initial source test report demonstrating that the gas collection and gas control systems have been installed for a minimum of 15 years.

(iii) All records needed to verify that the landfill meets the exemption criteria under subdivision (k).

(3) An Annual Report shall be submitted by any owner or operator subject to the requirements of this rule. The Annual Report shall cover the period of January 1 through December 31 of each year. Each Annual Report shall be submitted by March 15 of the following year to the District. The Annual Report shall contain the following:

(A) MSW Landfill name, owner and operator, address, solid waste information system (SWIS) identification number, landfill status (active, closed, inactive) and estimated waste-in–place in tons;

(B) Total volume of landfill gas collected (reported in standard cubic feet);

(C) Average composition of the landfill gas collected over the reporting period (reported in percent methane and percent carbon dioxide by volume);

(D) Gas control device type, year of installation, rating, fuel type, and total amount of landfill gas combusted in each gas control device;

(E) The date that the gas collection and gas control systems were installed and in full operation;

(F) The percent methane destruction efficiency of each gas control device;

(G) Type and amount of supplemental fuels burned with the landfill gas in each device;

(H) Total volume of landfill gas shipped off-site, the composition of the landfill gas collected (reported in percent methane and percent carbon dioxide by volume), and the recipient of the gas;

(I) Most recent topographic map of the site showing the areas with final cover and a geomembrane, and areas with final cover without a geomembrane, with corresponding percentages over the landfill surface; and

(J) The records required by paragraph (f)(1) except for records required by subparagraphs (f)(1)(B), (f)(1)(E) and (f)(1)(F).

(4) Any report or information required in paragraph (f)(2) or (f)(3) must be certified by a responsible official that the statements and information in the report are true, accurate, and complete.

(g) Active Landfill Compliance Schedule

The MSW landfill owner or operator shall comply with the active landfill requirements of this rule or an approved Rule 1150.1 Compliance Plan as specified in subdivision (i). An MSW landfill owner or operator that requires one or more alternatives to comply with this rule due to the April 1, 2011 rule amendment, shall submit a request for such alternatives as specified in subdivision (i) by May 6, 2011 that demonstrates compliance no later than July 1, 2011, and shall comply with any previously approved Rule 1150.1 Compliance Plan until July 1, 2011 or until the owner or operator has received an approved revised Rule 1150.1 Compliance Plan. On and after July 1, 2011, the MSW landfill owner or operator shall operate pursuant to an approved Rule 1150.1 Compliance Plan or, if plan approval is pending, the revised Rule 1150.1 Compliance Plan submitted on or before May 6, 2011.

(h) Inactive Landfill Requirements

The MSW landfill owner or operator shall comply with either the applicable requirements in paragraphs (h)(1) and (h)(2) or submit alternatives to this rule as specified in subdivision (i).

(1) Inactive landfills that have a landfill gas collection system shall meet all of the active landfill requirements. For those inactive landfills without a gas collection system and determined to need one, meet all of the active landfill requirements, except the gas collection and gas control systems

design plan. Applications for permits shall be submitted no later than one year after notification by the Executive Officer.

(2) Inactive landfills without a gas collection system:

(A) Upon discovery of TOC measured as methane exceeding 200 ppmv at any location on the landfill surface, apply mitigation measures such as compaction, additional cover, and/or watering to reduce the emissions to less than 200 ppmv. The procedure used for measurement of TOC shall meet the requirements of Section 3.0, Attachment A.

(B) Submit the following data and/or meet the required action in paragraph (h)(1):

(i) No later than 30 days after the receipt of a request, submit to the Executive Officer a screening questionnaire pursuant to California Air Resources Board Health and Safety Code (H & S) 41805.5.

(ii) No later than 90 days after the date of a second request, submit to the Executive Officer a solid waste air quality assessment test (SWAT) report pursuant to H & S 41805.5, to determine whether or not a landfill gas collection and gas control systems and/or a subsurface refuse boundary probe sampling system shall be required to be installed.

(iii) If additional time is needed to provide the information required in clauses (h)(2)(B)(i) and (h)(2)(B)(ii), a written request for an extension may be submitted in writing to the Executive Officer, indicating the amount of time that is needed to obtain such information. Such a request for an extension may be submitted to the Executive Officer no later than 30 days after the receipt of the Executive Officer's requests as specified in clauses (h)(2)(B)(i) and (h)(2)(B)(ii).

(iv) Upon notification by the Executive Officer that a landfill gas collection and gas control systems and/or a subsurface refuse boundary probe sampling system shall be required, comply with paragraph (h)(1).

(i) Alternatives

The owner or operator of a MSW landfill may request alternatives to the compliance requirements, monitoring requirements, test methods, and test procedures of this rule. All requests for alternatives to the requirements of this rule shall be submitted to the Executive Officer in a Rule 1150.1 Compliance Plan. The Executive Officer shall review the Rule 1150.1 Compliance Plan and either approve it, disapprove it, or request that additional information be submitted. Unless a determination is made by the Executive Officer that the Rule 1150.1 Compliance Plan will provide equivalent levels of emission control and enforceability, as would compliance with the requirements of this rule, the Executive Officer will deny the plan. Criteria that the Executive Officer may use to evaluate requests for alternatives include, but are not limited to: compliance history, documentation, containment of the landfill gas flow rate measured methane concentrations for individual gas collection wells or components, permits, component testing and surface monitoring results, gas collection and gas control systems operations, maintenance and inspection records, and historical meteorological data. Requests for alternatives may include, but are not limited to, the following:

(1) Semi-continuous operation of the gas collection and gas control systems due to insufficient landfill gas flow rates.

(2) Additional time for leak repairs for landfills having consistent issues related to the procurement and delivery of necessary parts to complete the repairs.

(3) Alternative wind speed requirements for landfills consistently having wind speed in excess of the limit specified in Sec.2.2.1 of Attachment A.

(j) Test Methods

(1) Methods of Analysis

(A) Either U.S. EPA Reference Method 25 or U.S. EPA Reference Method 18 (inlet only), 40 CFR, Part 60, Appendix A, SCAQMD Method 25.1 or SCAQMD Method 25.3 shall be used to determine the efficiency of the gas control system in reducing NMOC. If using Method 18, the minimum list of compounds to be tested shall be those published in the most recent Compilation of Air Pollutant Emission Factors (AP-42). The equation in subparagraph (j)(1)(B) shall be used to calculate efficiency.

(B) U.S. EPA Reference Method 25, 40 CFR, Part 60, Appendix A, SCAQMD Method 25.1, or SCAQMD Method 25.3 shall be used to determine the efficiency of the gas control system in reducing the outlet NMOC concentration to less than 20 ppmv, dry basis as hexane at 3 percent oxygen. The following equation shall be used to calculate efficiency:

$$\text{Control Efficiency (\%)} = \frac{(\text{NMOC}_{\text{in}} - \text{NMOC}_{\text{out}})}{(\text{NMOC}_{\text{in}})} \times 100\%$$

where,

NMOC_{in} = mass of NMOC entering control device

NMOC_{out} = mass of NMOC exiting control device

(C) Either U.S. EPA Reference Method 25, U.S. EPA Reference Method 18, 40 CFR, Part 60, Appendix A, SCAQMD Method 25.1, SCAQMD Method 25.3, ASTM Method D1945, or ASTM Method D1946 shall be used to determine the efficiency of the gas control system in reducing methane. The equation in subparagraph (j)(1)(D) shall be used to calculate efficiency.

(D) U.S. EPA Reference Method 25, U.S. EPA Reference Method 18, 40 CFR, Part 60, Appendix A, SCAQMD Method 25.1, SCAQMD Method 25.3, ASTM Method D1945, or ASTM Method D1946 shall be used to determine the efficiency of the gas control system in reducing the outlet methane concentration to less than 20 ppmv, dry basis as hexane at 3 percent oxygen. The following equation shall be used to calculate efficiency:

$$\text{Control Efficiency (\%)} = \frac{(\text{Methane}_{\text{in}} - \text{Methane}_{\text{out}})}{(\text{Methane}_{\text{in}})} \times 100\%$$

where,

$\text{Methane}_{\text{in}}$ = mass of Methane entering control device

$\text{Methane}_{\text{out}}$ = mass of Methane exiting control device

(2) Equivalent Test Methods

Any other method demonstrated to be equivalent and approved in writing by the Executive Officers of the District, the California Air Resources Board (CARB), and the Regional Administrator of the United States

Environmental Protection Agency (U.S. EPA), Region IX, or their designees, may be used to determine compliance with this rule.

(3) Approval for Conducting Test and Analysis

The owner or operator shall use a test laboratory approved under the SCAQMD Laboratory Approval Program for source test methods cited in subdivision (j). If there is no approved laboratory, then approval of the testing procedures used by the laboratory shall be granted by the Executive Officer on a case-by-case basis based on SCAQMD protocols and procedures. In addition, when more than one source test method or set of source test methods are specified for any testing, the application of these source test methods to a specific set of test conditions is subject to approval by the Executive Officer.

(4) Violation of Test Methods

A violation established by any one of the specific source test methods or set of source test methods shall constitute a violation of this rule.

(k) Exemptions

An MSW landfill may be temporarily exempt from all or any portion of the requirements of this rule if the owner or operator can demonstrate to the Executive Officer that the MSW landfill emissions meet the requirements of paragraphs (k)(1) through (k)(5), temporary exemptions may be independently determined by the Executive Officer, if the MSW landfill emissions meet the requirements of paragraphs (k)(1) through (k)(5). MSW landfills issued temporary exemption letters by the Executive Officer shall remain exempt, subject to periodic review, provided:

(1) The MSW landfill complies with the requirements of paragraphs (d)(10), (d)(11) and (d)(12).

(2) The MSW landfill emits less than 55 tons per year of NMOC as specified in 40 CFR, Part 60, Section 60.752(b) or, for a closed landfill, as specified in 40 CFR, Part 60, Section 60.752(b)(2)(v)(C).

(3) The MSW landfill constitutes a less than significant health risk. In making this determination the Executive Officer shall consider the listed factors in subparagraphs (k)(3)(A) through (k)(3)(G). Where not specified, in evaluating the cancer risks and hazard indices, the Executive Officer shall be guided by the definitions in District Rule 1401 - New

Source Review of Carcinogenic Air Contaminants, and Rule 1402 - Control of Toxic Air Contaminants from Existing Sources.

(A) The proximity to, and any adverse impacts on, residences, schools, hospitals or other locations or structures which have children, or elderly or sick persons.

(B) The emission migration beyond the landfill property boundary.

(C) The complaint history.

(D) The age and closure date.

(E) The amount and type of waste deposited.

(F) That the emissions of carcinogenic air contaminants, specified in Tables 1 & 2, Attachment A, from the landfill will not result in a maximum individual cancer risk greater than one in one million (1×10^{-6}) at any receptor location.

(G) That the emissions of TAC, specified in Tables 1 & 2, Attachment A, from the landfill will not result in a total acute or chronic Hazard Index of greater than 1.

(4) The MSW landfill is in compliance with District Nuisance Rule 402.

(5) The MSW landfill does not generate sufficient gas to support a gas control system. In making this determination, the Executive Officer shall apply the requirements of subparagraphs (k)(5)(A) and (k)(5)(B), and shall only consider temporary exemptions from the requirements of subdivision (d).

(A) If the MSW landfill is closed or inactive and has a landfill gas heat input capacity equal to or greater than 3.0 MMBtu/hr, the owner or operator must demonstrate to the satisfaction of the Executive Officer that after four consecutive quarterly instantaneous monitoring periods there are no surface methane leaks exceeding 200 ppmv, and submit a waste-in-place report and all instantaneous surface monitoring records from the previous year to the Executive Officer.

(B) If the MSW landfill is active and has 450,000 tons of waste-in-place or greater and a landfill gas heat input capacity greater than or equal to 3.0 MMBTU/hr, the owner or the operator must demonstrate to the satisfaction of the Executive Officer that after four consecutive quarterly instantaneous monitoring periods there

are no surface methane leaks exceeding 200 ppmv and re-calculate the heat capacity annually.

Such a temporary exemption shall be reviewed periodically by the Executive Officer, to consider the land use surrounding the landfill and gaseous emissions, and the impact on the public. Depending upon the results of the review, the Executive Officer may extend or terminate the exemption.

(l) Loss of Exemption

If an MSW landfill should have its temporary exemption terminated, the owner or operator shall comply with the active landfill requirements of this rule.

(m) The amendments to this rule adopted April 1, 2011 implementing the State Air Resources Board Landfill Rule Cal. Code Regs. Tit. 17 §95460 et seq. shall not become effective until the State Air Resources Board Executive Officer or designee provides a letter to the District stating that the enforcement of these requirements shall be in lieu of the State Air Resources Board rule, which shall not be enforced within the District.

ATTACHMENT A

1.0 SUBSURFACE REFUSE BOUNDARY SAMPLING PROBES
Paragraphs (d)(9) and (e)(1) Requirements of Rule 1150.1

1.1 Subsurface Probe Design and Installation

Landfills which are subject to Rule 1150.1 must install and maintain a subsurface refuse boundary probe sampling system of adequate design to determine if gas migration exists for the ultimate purpose of preventing surface emissions. CalRecycle also requires the installation of refuse boundary probes for purposes of detecting and ultimately preventing subsurface migration of landfill gas past the permitted property boundary of the landfill/disposal site as well as the prevention of the accumulation of landfill gas in on-site structures. It is the District's intent that the subsurface refuse boundary probes required by paragraph (d)(9) of Rule 1150.1 be designed and installed in such a manner as to comply with the requirements of CalRecycle (whenever possible) and Sections 1.1.1 through 1.1.4.

1.1.1 The probes shall be installed within the landfill property line and outside the refuse disposal area.

1.1.2 Wherever accessible, the probes shall be located no further than 100 feet from the refuse boundary.

1.1.3 The spacing between probes shall be based on the adjacent land use no further than 1320 feet (1/4 mile) from the refuse boundary and shall be determined as follows:

LAND USE	SPACING
Residential/Commercial	100 feet
Public Access	500 feet
Undeveloped Open Space, (No Public Access)	650 feet
Landfill with Liners	1000 feet

1.1.4 Each probe shall be capped, sealed, have a sampling valve and be of multiple-depth design for which the depth shall be determined based on the depth of refuse no further than 500 feet from the probe as follows:

First Depth	10 feet below surface.
Second Depth	25% of refuse depth or 25 feet below surface, whichever is deeper.

Third Depth	50% of refuse depth or 50 feet below surface, whichever is deeper.
Fourth Depth	75% of refuse depth or 75 feet below surface, whichever is deeper.

Second, third, or fourth depth probes may be deleted if the required depth of such probe is deeper than the depth of the refuse.

1.2 Number of Samples

All refuse boundary gas probes at each depth shall be monitored monthly for TOC measured as methane using a portable flame ionization detector (FID) meeting the requirements of Section 3.2 and with a tube connected to the probe sampling valve. In addition, samples shall be taken as specified in Section 1.2.1 or 1.2.2 to determine the concentration of both TOC and TAC. The Executive Officer may require additional probes to be sampled upon written request.

1.2.1 If the TOC concentration measured with the FID does not exceed 5% by volume in any of the probes, collect one bag sample from one probe with the highest concentration, or

1.2.2 If the TOC concentration measured with the FID for any of the probes exceeds 5% by volume, collect one bag sample per probe from the probes with the highest concentrations above 5% by volume, from at least five probes.

1.3 Subsurface Refuse Boundary Probe Sampling Procedure

1.3.1 Prior to collecting gas samples, evacuate the probe (the probes must be sealed during evacuation) until the TOC concentration remains constant for at least 30 seconds.

1.3.2 The constant TOC concentration shall be measured using an FID that meets the requirements in Section 3.2.

1.3.3 Collect approximately a 10-liter gas sample in a Tedlar (DuPont trade name for polyvinyl) bag or equivalent container over a continuous ten-minute period using the evacuated container sampling procedure described in Section 7.1.1 of EPA Method 18 or direct pump sampling procedure described in Section 7.1.2 of EPA Method 18. The container shall be LIGHT-SEALED.

1.4 Subsurface Refuse Boundary Probe Analytical Procedures

All samples collected shall be analyzed no later than 72 hours after collection for TOC using U.S. EPA Method 25, 40 CFR, Part 60, Appendix A analysis or a portable FID that meets the requirements in Section 3.2 and for the TAC specified in Table 1 and upon written request, Table II, using U.S. EPA Compendium Method TO-14.

1.5 Chain of Custody (Required for samples sent to the lab)

A custody sheet shall accompany the bag samples. Each time a bag changes hands, it shall be logged on the custody sheet with the time of custody transfer recorded. Laboratory personnel shall record the condition of the sample (full, three-fourths full, one-half full, one-fourth full, or empty). An example of a custody sheet is shown in Figure 4.

1.6 Recording the Results

1.6.1 Record the volume concentration of TOC measured as methane for each individually identified refuse boundary probe (at each depth) and the volume concentration of TAC for selected probes on a quality control sheet as shown in Figure 3. Include a topographic map drawn to scale with the location of both the refuse boundary probes and the gas collection system clearly marked and identified.

1.6.2 Maintain and submit the results as specified in subdivision (f) of Rule 1150.1.

2.0 INTEGRATED LANDFILL SURFACE SAMPLING
Paragraph (d)(11) and (e)(2) Requirements of Rule 1150.1

2.1 Number of Samples

The number of samples collected will depend on the area of the landfill surface. The entire landfill disposal area shall be divided into individually identified 50,000 square foot grids. One monthly sample shall be collected from each grid for analysis. Any area that the Executive Officer deems inaccessible or dangerous for a technician to enter may be excluded from the sampling grids monitored by the landfill owner or operator. To exclude an area from monitoring, the landfill owner or operator shall file a written request with the Executive Officer. Such a request shall include an explanation of the requested exclusion and photographs of the area. The Executive Officer shall notify the landfill owner or operator in

writing of the decision. Any exclusion granted shall apply only to the monitoring requirement. The 25 ppmv limit specified in paragraph (d)(11) of Rule 1150.1 applies to all areas.

2.2 Integrated Surface Sampling Conditions

2.2.1. The average wind speed during this sampling procedure shall be five miles per hour or less. Surface sampling shall be terminated when the average wind speed exceeds five miles per hour or the instantaneous wind speed exceeds ten miles per hour. Average wind speed is determined on a 15-minute average.

2.2.2. Surface sampling shall be conducted when the landfill is dry. The landfill is considered dry when there has been no measurable precipitation for the preceding 72 hours prior to sampling. Most major newspapers report the amount of precipitation that has fallen in a 24-hour period throughout the Southern California area. Select the nearest reporting station that represents the landfill location or provide for measurable precipitation collection at the MSW landfill wind monitoring station.

2.3 Integrated Surface Sampler Equipment Description

An integrated surface sampler is a portable self-contained unit with its own internal power source. The integrated sampler consists of a stainless steel collection probe, a rotameter, a pump, and a 10-liter Tedlar bag enclosed in a LIGHT-SEALED CONTAINER to prevent photochemical reactions from occurring during sampling and transportation. The physical layout of the sampler is shown in Figure 1.

An alternate integrated surface sampler may be used, provided that the landfill owner or operator can show an equivalency with the sampler specifications in Section 2.4 and shown in Figure 1. All alternatives shall be submitted as specified in subdivision (i) of Rule 1150.1.

2.4 Integrated Surface Sampler Equipment Specifications

2.4.1 Power: Batteries or any other power source.

2.4.2 Pump: The diaphragm shall be made of non-lubricated Viton (Dupont trade name for co-polymer of hexafluoropropylene and vinylidene fluoride) rubber.

2.4.3 Bag: One 10-liter Tedlar bag with a valve. The Tedlar bag shall be contained in a LIGHT-SEALED CONTAINER. The valve shall be leak free and constructed of aluminum, stainless steel, or non-reactive plastic with a Viton or Buna-N (butadiene acrylonitrile co-polymer) o-ring seal.

2.4.4 Rotameter: The rotameter shall be made of borosilicate glass or other non-reactive material and have a flow range of approximately 0-to-1 liter per minute. The scale shall be in milliliters or an equivalent unit. The graduations shall be spaced to facilitate accurate flow readings.

2.4.5 Air Flow Control Orifice: Needle valve in the rotameter.

2.4.6 Funnel: 316 stainless steel.

2.4.7 Fittings, Tubing and Connectors: 316 stainless steel or Teflon.

2.5 Integrated Surface Sampling Procedure

2.5.1 An integrated surface sampler as described in Section 2.4 shall be used to collect a surface sample approximately 8-to-10 liters from each grid.

2.5.2 During sampling, the probe shall be placed 0-to-3 inches above the landfill surface.

2.5.3 The sampler shall be set at a flow rate of approximately 333 cubic centimeters per minute

2.5.4 Walk through a course of approximately 2,600 linear feet over a continuous 25-minute period. Figure 2 shows a walk pattern for the 50,000 square foot grid.

2.6 Integrated Surface Sample Analytical Procedures

All samples collected shall be analyzed no later than 72 hours after collection for TOC using U.S. EPA Method 25, 40 CFR, Part 60, Appendix A analysis or a portable FID that meets the requirements in Section 3.2. In addition, the samples specified in Section 2.6.1 or 2.6.2 must be analyzed no later than 72 hours after collection for the TAC specified in Table 1 and upon written request, Table II, using U.S. EPA Compendium Method TO-14.

2.6.1 Ten percent of all samples which have a concentration of TOC greater than 25 ppmv as methane, or

2.6.2 Two samples if all samples are 25 ppmv or less of TOC or two samples if there are less than 20 samples above 25 ppmv.

The Executive Officer may require more samples to be tested for TAC if he determines there is a potential nuisance or public health problem.

2.7 Chain of Custody (Required for samples sent to the lab)

A custody sheet shall accompany the bag samples. Each time a bag changes hands, it shall be logged on the custody sheet with the time of custody transfer recorded. Laboratory personnel shall record the condition of the sample (full, three-fourths full, one-half full, one-fourth full, or empty). An example of a custody sheet is shown in Figure 4.

2.8 Recording the Results

2.8.1 Record the volume concentration of both TOC measured as methane for each grid and the volume concentration for the required TAC on a quality control sheet as shown in Figure 3. Include a topographic map drawn to scale with the location of the grids and the gas collection system clearly marked and identified.

2.8.2 Record the wind speed during the sampling period using the wind speed and direction monitoring system required in paragraph (d)(17) of Rule 1150.1.

2.8.3 Maintain and submit the results as specified in subdivision (f) of Rule 1150.1.

3.0 INSTANTANEOUS LANDFILL SURFACE MONITORING

Paragraphs (d)(12) and (e)(3) Requirements of Rule 1150.1

3.1 Monitoring Area

The entire landfill disposal area shall be monitored once each calendar quarter. Any area of the landfill that the Executive Officer deems as inaccessible or dangerous for a technician to enter may be excluded from the area to be monitored by the landfill owner or operator. To exclude an area from monitoring, the landfill owner or operator shall file a petition with the Executive Officer. Such a request shall include an explanation of why the area should be excluded and photographs of the area. Any excluded area granted shall only apply to the monitoring requirement. The 500 ppmv limit specified in paragraph (d)(12) of Rule 1150.1 applies to all areas.

3.2 Equipment Description and Specifications

A portable FID shall be used to instantaneously measure the concentration of TOC measured as methane at any location on the landfill. The FID shall meet the

specifications listed in Sections 3.2.1 through 3.2.4 and shall be kept in good operating condition.

3.2.1 The portable analyzer shall meet the instrument specifications provided in Section 3 of U.S. EPA Method 21, except that:

3.2.1.1 "Methane" shall replace all references to VOC.

3.2.1.2 A response time of 15 seconds or shorter shall be used instead of 30 seconds.

3.2.1.3 A precision of 3% or better shall be used instead of 10%.

In addition the instrument shall meet the specifications in Sections 3.2.1.4 through 3.2.1.6.

3.2.1.4 A minimum detectable limit of 5 ppmv (or lower).

3.2.1.5 A flame-out indicator, audible and visual.

3.2.1.6 Operate at an ambient temperature of 0 - 50° C.

3.2.2 The calibration gas shall be methane, diluted to a nominal concentration of 10,000 ppmv in air for subsurface refuse boundary probe monitoring and sample analysis to comply with paragraph (e)(1) of Rule 1150.1, 25 ppmv in air for integrated sample analyses to comply with paragraph (e)(2) of Rule 1150.1 and 500 ppmv in air for instantaneous monitoring to comply with paragraph (e)(3) of Rule 1150.1.

3.2.3 To meet the performance evaluation requirements in Section 3.1.3 of U.S. EPA Method 21, the instrument evaluation procedures of Section 4.4 of U.S. EPA Method 21 shall be used.

3.2.4 The calibration procedures provided in Section 4.2 of U.S. EPA Method 21 shall be followed at the beginning of each day before commencing a surface monitoring survey.

3.3 Monitoring Procedures

3.3.1 The owner or operator shall monitor the landfill disposal area for TOC measured as methane using the described portable equipment.

3.3.2 The sampling probe shall be placed at a distance of 0-3 inches above any location of the landfill to take the readings.

3.3.3 At a minimum, an individually identified 50,000 square foot grid shall be used and a walk pattern similar to that illustrated in Figure 2 shall be implemented including areas where visual observations indicate elevated

concentrations of landfill gas, such as distressed vegetation and cracks or seeps in the cover.

3.4 Recording the Results

3.4.1 Record the location and concentration of TOC measured as methane for any instantaneous reading of 200 ppmv or greater on a topographic map of the landfill, drawn to scale with the location of both the grids and the gas collection system clearly marked and identified.

3.4.2 Maintain and submit the results as specified in subdivision (f) of Rule 1150.1.

4.0 LANDFILL GAS SAMPLE FROM GAS COLLECTION SYSTEM Paragraph (e)(5) Requirement of Rule 1150.1

4.1 Number of Samples

Collect one monthly sample of landfill gas for analysis from the main gas collection header line entering the gas treatment and/or gas control system(s).

4.2 Sampling Procedure

Collect approximately a 10-liter sample in a Tedlar bag or equivalent container over a continuous ten-minute period.

4.3 Analytical Procedures

Samples collected shall be analyzed no later than 72 hours after collection for TOC using U.S. EPA Method 25, 40 CFR, Part 60, Appendix A analysis and for the TAC specified in Table 1 and upon written request, Table II, using U.S. EPA Compendium Method TO-14.

4.4 Chain of Custody (Required for samples sent to the lab)

A custody sheet shall accompany the bag samples. Each time a bag changes hands, it shall be logged on the custody sheet with the time of custody transfer recorded. Laboratory personnel shall record the condition of the sample (full, three-fourths full, one-half full, one-fourth full, or empty). An example of a custody sheet is shown in Figure 4.

4.5 Recording the Results

4.5.1 Record the volume concentration of both TOC measured as methane and the volume concentration for the required TAC on a quality control sheet as shown in Figure 3. Include a topographic map drawn to scale with the

location of the gas collection and gas control systems clearly marked and identified.

4.5.2 Maintain and submit the results as specified in subdivision (f) of Rule 1150.1.

5.0 AMBIENT AIR SAMPLES AT THE LANDFILL PROPERTY BOUNDARY

Paragraph (e)(6) Requirement of Rule 1150.1

5.1 Number of Samples

Monthly ambient air samples shall be collected for analysis at the landfill property boundary from both an upwind and downwind sampler sited to provide good meteorological exposure to the predominant offshore (drainage land breeze) and onshore (sea breeze) wind flow patterns. The upwind and downwind samples shall be collected simultaneously over two 12 hour periods beginning between 9:00 a.m. and 10:00 a.m., and 9:00 p.m. and 10:00 p.m. on the same day or different days.

5.2 Ambient Air Sampling Conditions

Ambient air sampling shall be conducted on days when stable (offshore drainage) and unstable (onshore sea breeze) meteorological conditions are representative for the season. Preferable sampling conditions are characterized by the following meteorological conditions:

5.2.1 Clear cool nights with wind speeds of two miles per hour or less, and

5.2.2 Onshore sea breezes with wind speeds ten miles per hour or less.

No sampling will be conducted if the following adverse meteorological conditions exist:

5.2.3 Rain,

5.2.4 Average wind speeds greater than 15 miles per hour for any 30-minute period, or

5.2.5 Instantaneous wind speeds greater than 25 miles per hour.

Continuously recorded on-site wind speed and direction measurements required in paragraph (d)(17) of Rule 1150.1 will characterize the micrometeorology of the site and serve to verify that the meteorological criteria have been met during sampling.

5.3 Ambient Air Sampler Equipment Description

An ambient air sampling unit consists of a 10-liter Tedlar bag, a DC-operated pump, stainless steel capillary tubing to control the sample rate to the bag, a bypass valve to control the sample flow rate (and minimize back pressure on the pump), a Rotameter for flow indication to aid in setting the flow, a 24-hour clock timer to shut off the sampler at the end of the 24-hour sampling period, and associated tubing and connections (made of stainless steel, Teflon, or borosilicate glass to minimize contamination and reactivity). The physical layout of the sampler is shown in Figure 5.

An alternate ambient air sampler may be used, provided that the landfill owner or operator can show an equivalency with the sampler specifications in Section 5.3 and shown in Figure 5. All alternatives shall be submitted as specified in subdivision (i) of Rule 1150.1.

5.4 Ambient Air Sampler Equipment Specifications

The equipment used when conducting air samples at any landfill property boundary shall meet the following specifications:

5.4.1 Power: one 12V DC marine battery. The marine battery provides 12V DC to the pump and the clock.

5.4.2 Pump: one 12V DC pump. The diaphragm shall be made of non-lubricated Viton rubber. The maximum pump unloaded flow rate shall be 4.5 liters per minute.

5.4.3 Bag: One 10-liter Tedlar bag with a valve. The Tedlar bag shall be enclosed in a LIGHT-SEALED CONTAINER. The valve is a push-pull type constructed of aluminum and stainless steel, with a Viton or Buna-N (butadiene acrylonitrile co-polymer) o-ring seal.

5.4.4 Rotameter: made of borosilicate glass and has a flow range of 3-to-50 cubic centimeters per minute. The scale is in millimeters (mm) with major graduations (labeled) every 5 mm and minor graduations every 1 mm.

5.4.5 Air flow control orifice: 316 stainless steel capillary tubing.

5.4.6 Bypass valve.

5.4.7 Fittings, tubing, and connectors: 315 stainless steel or Teflon.

5.4.8 Clock timer with an accuracy of better than 1%.

5.5 Ambient Air Sample Analytical Procedures

Samples collected must be analyzed no later than 72 hours after collection for TOC using U.S. EPA Method 25, 40 CFR, Part 60, Appendix A analysis or a portable FID that meets the requirements in Section 3.2 and for the TAC specified in Table 1 and upon written request, Table II, using U.S. EPA Compendium Method TO-14.

5.6 Chain of Custody (Required for samples sent to the lab)

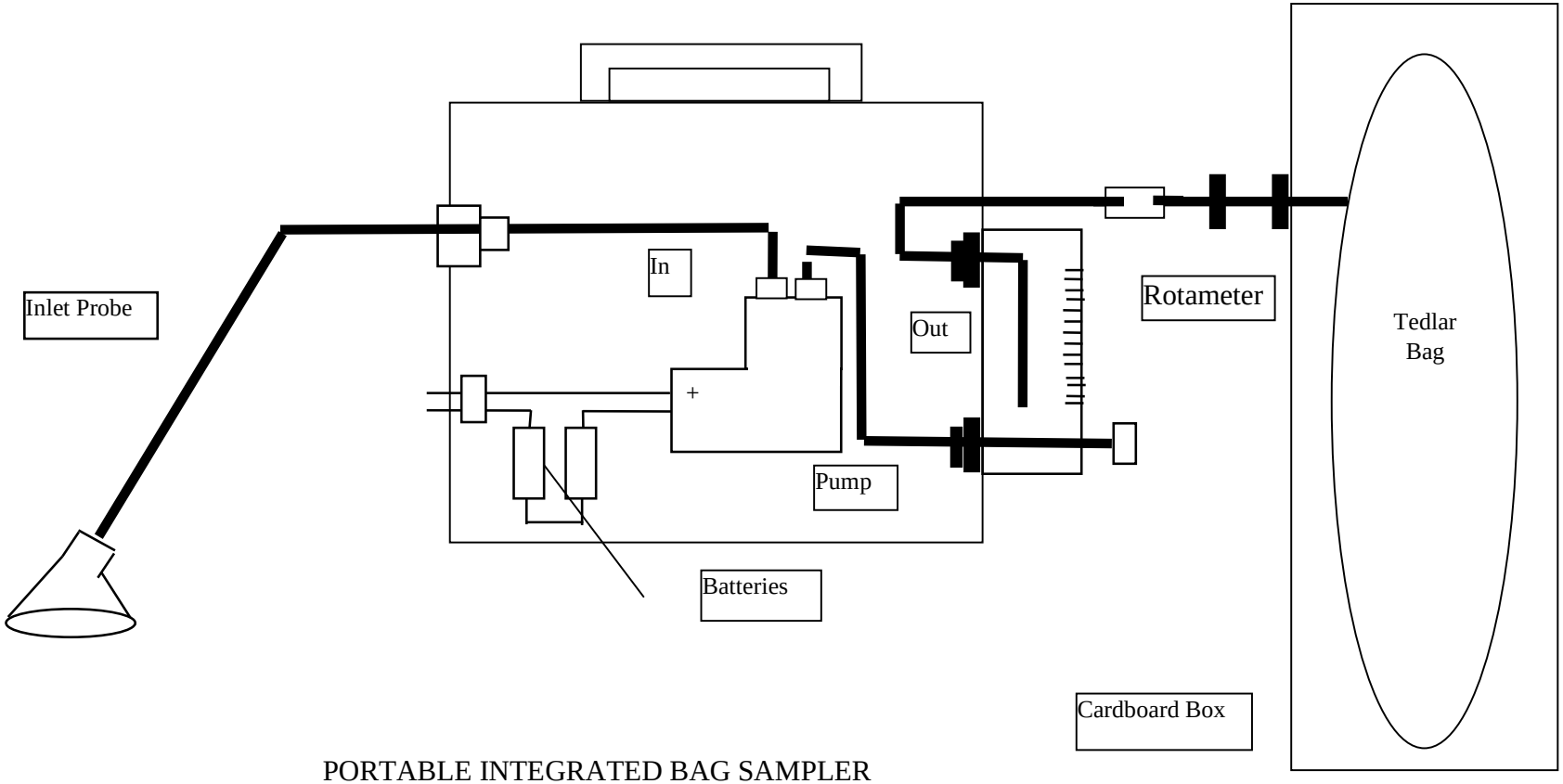
A custody sheet shall accompany the bag samples. Each time a bag changes hands, it shall be logged on the custody sheet with the time of custody transfer recorded. Laboratory personnel shall record the condition of the sample (full, three-fourths full, one-half full, one-fourth full, or empty). An example of a custody sheet is shown in Figure 4.

5.7 Recording the Results

5.7.1 Record the volume concentration of TOC measured as methane and the volume concentration of TAC for each sample on a quality control sheet as shown in Figure 3. Include a topographic map drawn to scale with the location of both the upwind and downwind samplers and the gas collection and gas control systems clearly marked and identified.

5.7.2 Record the wind speed and direction during the 24-hour sampling period using the wind speed and direction monitoring system required in paragraph (d)(17) of Rule 1150.1.

5.7.3 Maintain and submit the results as specified in subdivision (f) of Rule 1150.1.



PORTABLE INTEGRATED BAG SAMPLER
Physical Layout

Figure 1

Typical Landfill Walk Pattern
for a 50,000 Square Foot Grid

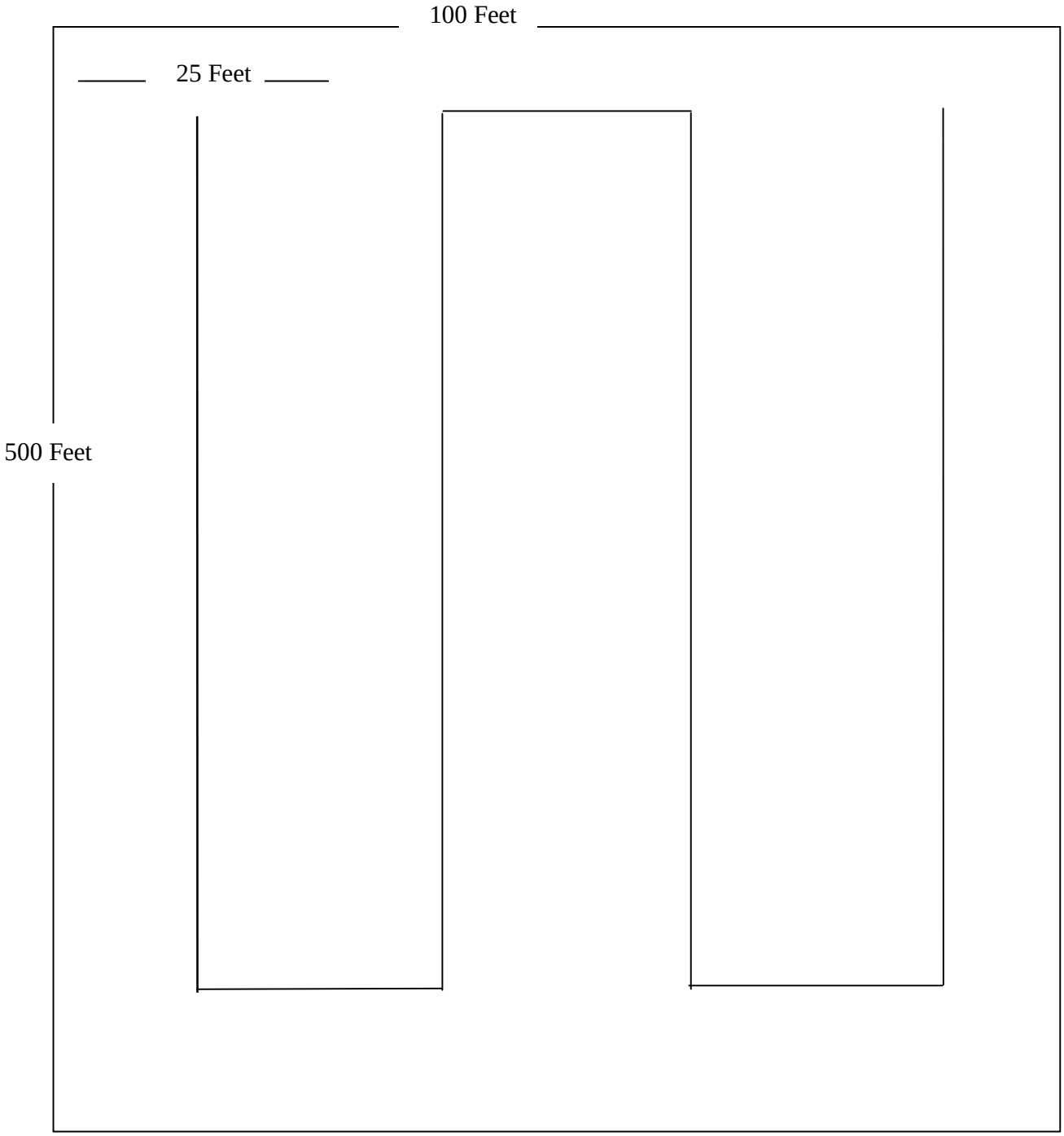


Figure 2

TYPICAL QUALITY CONTROL SHEET

- Prior to use, the Tedlar bag system shall be leak checked, evacuated and filled with purified nitrogen three times to flush out the old sample.
- All samples must be kept in LIGHT-SEALED CONTAINERS to avoid photochemical reactions.

OPERATION					BAG SAMPLES				COMMENTS
Grid or probe #	Date	Wind Speed	Time On	Time Off	I.D.#	Valve Open	Rotameter Reading	Pump (On/Off)	
Signature:									

Figure 3

BAG SAMPLE CUSTODY FORM

Project _____ Date: _____

Bag (I.D. #)									
Condition Received in Lab*									

Bags Prepared By: _____ Time: _____
Date: _____
Bags Taken Out By: _____ Time: _____
Bags Taken to Lab By _____
Bags Received In Lab By: _____ Time _____

* F = 1/2 full to full, 0 = Overfull (Bulging), L = 1/4 to 1/2 full,
E = Less than 1/4 full but contains some sample, N = No sample at all.

Figure 4

Rule 1150.1 (Cont.)
(Attachment A Continued)

(Amended April 1, 2011)

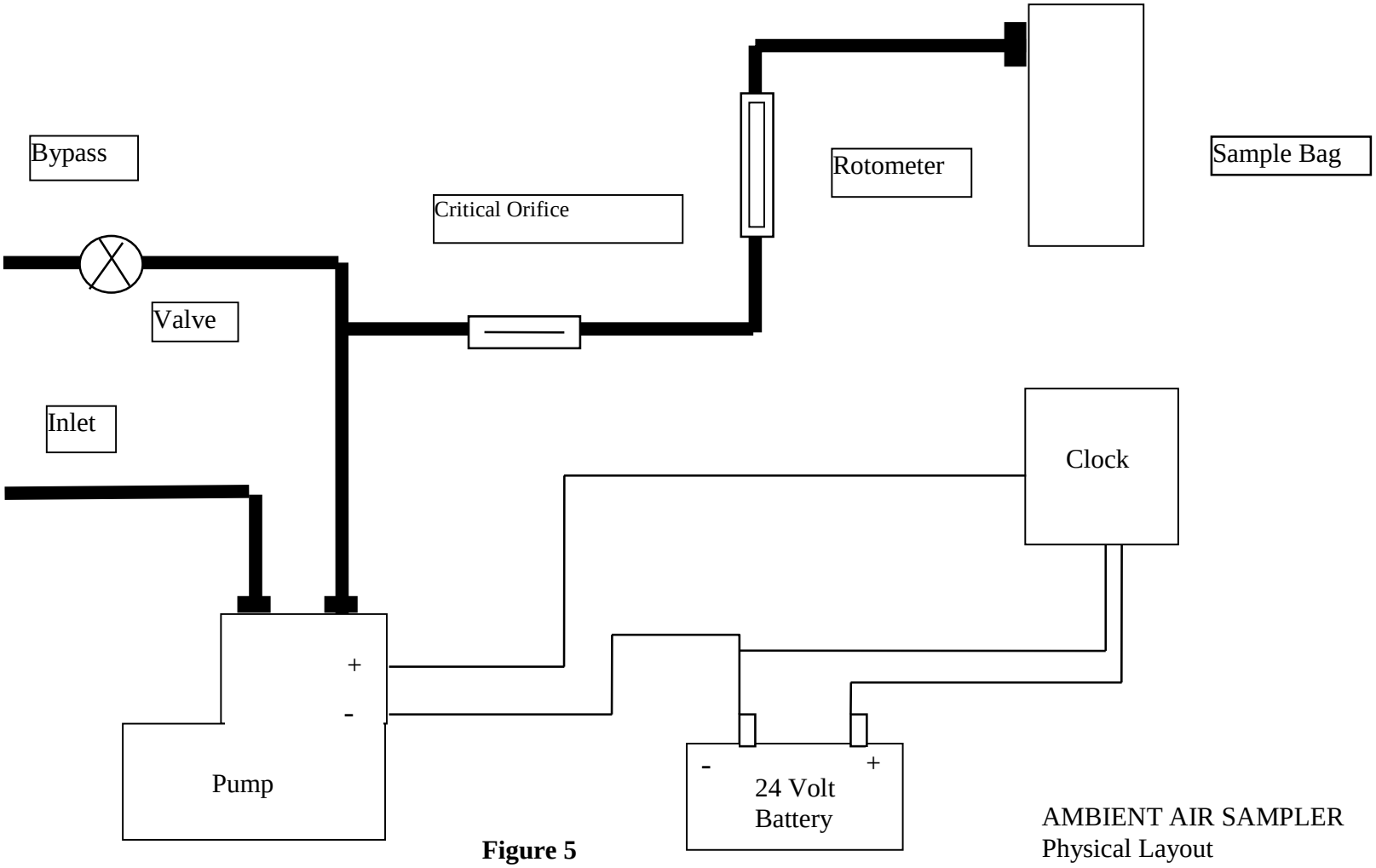


Figure 5

AMBIENT AIR SAMPLER
Physical Layout

TABLE 1 - CARCINOGENIC AND TOXIC AIR CONTAMINANTS
(Core Group)
Paragraph (e)(2), Subparagraphs (k)(3)(F) and (k)(3)(G) Requirements of Rule 1150.1

1.	Benzene	C_6H_6
2.	Benzyl Chloride	$C_6H_5H_2C1$
3.	Chlorobenzene	C_6H_5C1
4.	1,2 Dibromoethane (Ethylene Dibromide)	$BrCH_2CH_2Br$
5.	Dichlorobenzene	$C_6H_4C1_2$
6.	1,1 Dichloroethane (Ethylidene Chloride)	CH_3CHC1_2
7.	1,2 Dichloroethane (Ethylene Dichloride)	$C1H_2H_2C1$
8.	1,1 Dichloroethene (Vinylidene Chloride)	$CH_2 : CC1_2$
9.	Dichloromethane (Methylene Chloride)	CH_2C1_2
10.	Hydrogen Sulfide	H_2S
11.	Tetrachloroethylene (Perchloroethylene)	$C1_2C : CC1_2$
12.	Tetrachloromethane (Carbon Tetrachloride)	$CC1_4$
13.	Toluene	$C_6H_5CH_3$
14.	1,1,1 Trichloroethane (Methyl Chloroform)	CH_3CC1_3
15.	Trichloroethylene	$CHC1 : CC1_2$
16.	Trichloromethane (Chloroform)	$CHC1_3$
17.	Vinyl Chloride	$CH_2 : CHC1$
18.	Xylene	$C_6H_4(CH_3)_2$

TABLE 2 - CARCINOGENIC AND TOXIC AIR CONTAMINANTS
(Supplemental Group)
Paragraph (e)(2), Subparagraphs (k)(3)(F) and (k)(3)(G) Requirements of Rule 1150.1

1.	Acetaldehyde	CH3CHO
2.	Acrolein	CH2CHCHO
3.	Acrylonitrile	H2C : CHCN
4.	Allyl Chloride	H2C : CHCH2C1
5.	Bromomethane (Methyl Bromide)	CH3Br
6.	Chlorinated Phenols	
7.	Chloroprene	H2C : CHCC1 : CH2
8.	Cresol	CH3C6H4OH
9.	Dialkyl Nitrosamines	
10.	1,4 - Dioxane	OCH2CH2OCH2CH2
11.	Epichlorohydrin	CH2OCHCH2C1
12.	Ethylene Oxide	CH2CH2O
13.	Formaldehyde	HCHO
14.	Hexachlorocyclopentadiene	C5C16
15.	Nitrobenzene	C6H5NO2
16.	Phenol	C6H5OH
17.	Phosgene	COC12
18.	Polychlorinated Dibenzo-P-Dioxin	
19.	Polychlorinated Dibenzo Furan	
20.	Polychlorinated Biphenols	
21.	Polynuclear Aromatic Hydrocarbons	
22.	Propylene Oxide	CH2-CH-CH3
23.	Tetrahydrothiophene	CH2CH2CH2CH2S
24.	Thiophene	CHCHCHCHS

Attachment B

TITLE 27. Environmental Protection

Division 2. Solid Waste

Subdivision 1. Consolidated Regulations for Treatment, Storage, Processing or Disposal of Solid

Chapter 3. Criteria for All Waste Management Units, Facilities, and Disposal Sites

Subchapter S. Closure and Post-Closure Maintenance

Article 2. Closure and Post-Closure Maintenance Standards for Disposal Sites and Landfills

§21140. Section CIWMB -- Final Cover. (Tl4:§17773)

(a) The final cover shall function with minimum maintenance and provide waste containment to protect public health and safety by controlling at a minimum, vectors, fire, odor, litter and landfill gas migration. The final cover shall also be compatible with postclosure land use.

(b) In proposing a final cover design meeting the requirements under §21090, the owner or operator shall assure that the proposal meets the requirements of this section. Alternative final cover designs shall meet the performance requirements of ¶(a) and for MSWLF units, 40 CFR 258.60(b); shall be approved by the enforcement agency for aspects of ¶(a).

(c) The EA may require additional thickness, quality, and type of final cover depending on, but not limited to the following:

(1) a need to control landfill gas emissions and fires;

(2) the future reuse of the site; and

(3) provide access to all areas of the site as needed for inspection of monitoring and control facilities, etc.

NOTE

Authority cited: Sections 40502 and 43020, Public Resources Code; and Section 66796.22 (d), Government Code. Reference: Sections 43021 and 43103, Public Resources Code; and Section 66796.22(d), Government Code.

HISTORY

1. New section filed 6-18-97; operative 7-18-97 (Register 97, No. 25).

Attachment C

TITLE 27. Environmental Protection

Division 2. Solid Waste

Subdivision 1. Consolidated Regulations for Treatment, Storage, Processing or Disposal of Solid

Chapter 3. Criteria for All Waste Management Units, Facilities, and Disposal Sites

Subchapter 2. Siting and Design

Article 2. SWRCB -- Waste Classification and Management

§20200. SWRCB -- Applicability and Classification Criteria. (CI5: §2520)

(a) Concept--This article contains a waste classification system which applies to solid wastes that cannot be discharged directly or indirectly to waters of the state and which therefore must be discharged to waste management units (Units) for treatment, storage, or disposal in accordance with the requirements of this division. Wastes which can be discharged directly or indirectly *(e.g., by percolation)* to waters of the state under effluent or concentration limits that implement applicable water quality control plans *(e.g., municipal or industrial effluent or process wastewater)* are not subject to the SWRCB-promulgated provisions of this division. This waste classification system shall provide the basis for determining which wastes may be discharged at each class of Unit. Waste classifications are based on an assessment of the potential risk of water quality degradation associated with each category of waste.

(1) The waste classifications in this article shall determine where the waste can be discharged unless the waste does not consist of or contain municipal solid waste (MSW) and the discharger establishes to the satisfaction of the RWQCB that a particular waste constituent or combination of constituents presents a lower risk of water quality degradation than indicated by classification according to this article.

(2) Discharges of wastes identified in §20210 or §20220 of this article shall be permitted only at Units which have been approved and classified by the RWQCB in accordance with the criteria established in Article 3 of this subchapter, and for which WDRs have been prescribed or waived pursuant to Article 4, Subchapter 3, Chapter 4 of this subdivision (§21710 et seq.). Table 2.1 (of this article) presents a summary of discharge options for each waste category.

(b) Dedicated Units/Cells For Certain Wastes--The following wastes shall be discharged only at dedicated Units [or dedicated landfill cells *(e.g., ash monofill cell*)] which are designed and constructed to contain such wastes:

(1) wastes which cause corrosion or decay, or otherwise reduce or impair the integrity of containment structures;

(2) wastes which, if mixed or commingled with other wastes can produce a violent reaction (including heat, pressure, fire or explosion), can produce toxic byproducts, or can produce any reaction product(s) which:

(A) requires a higher level of containment;

(B) is a restricted waste; or

(C) impairs the integrity of containment structures.

(c) Waste Characterization--Dischargers shall be responsible for accurate characterization of wastes, including determinations of whether or not wastes will be

compatible with containment features and other wastes at a Unit under ¶(b), and whether or not wastes are required to be managed as hazardous wastes under Chapter 11 of Division 4.5 of Title 22 of this code.

(d) Management of Liquids at Landfills and Waste Piles--The following requirements apply to discharges of liquids at Class II waste piles and at Class II and Class III landfills, except as otherwise required for MSW landfills by more-stringent state and federal requirements under SWRCB Resolution No. 93-62 section 2908 of Title 23 of this Code (see 40CFR258.28) *[Note: see also definitions of "leachate" and "landfill gas condensate"* in §20164*]:*

(1) [Reserved.];

(2) wastes containing free liquids shall not be discharged to a Class II waste pile. Any waste that contains liquid in excess of the moisture-holding capacity of the waste in the Class II landfill, or which contains liquid in excess of the moisture-holding capacity as a result of waste management operations, compaction, or settlement shall only be discharged to a surface impoundment or to another Unit with containment features equivalent to a surface impoundment; and

(3) liquids or semi-solid waste (i.e., waste containing less than 50 percent solids, by weight), other than dewatered sewage or water treatment sludge as described in §20220(c), shall not be discharged to Class III landfills. Exceptions may be granted by the RWQCB if the discharger can demonstrate that such discharge will not exceed the moisture-holding capacity of the landfill, either initially or as a result of waste management operations, compaction, or settlement, so long as such discharge is not otherwise prohibited by applicable state or federal requirements.

2-10-86

(Adopted October 18, 1985)

RULE 1150.2. CONTROL OF GASEOUS EMISSIONS FROM INACTIVE LANDFILLS

(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 July 8, 1988)(Amended May 5, 1989)(Amended March 2, 1990)
(Amended June 28, 1990)(Amended November 2, 1990)(Amended December 7, 1990)
(Amended August 2, 1991)(Amended September 6, 1991)
(Amended December 9, 1994)(Amended March 8, 1996)
(Amended June 13, 1997)(Amended December 11, 1998)(Amended December 2, 2005)

RULE 1151. MOTOR VEHICLE AND MOBILE EQUIPMENT NON-ASSEMBLY LINE COATING OPERATIONS

The provisions of subdivisions (a) through (i) of this rule shall sunset on June 30, 2008, and subdivisions (a) through (i) of Appendix A shall become effective on July 1, 2008.

(a) Purpose and Applicability

The purpose of this rule is to reduce emissions of volatile organic compounds (VOC) and stratospheric ozone-depleting and global-warming compounds from coatings applied on Group I Vehicles and Equipment and Group II Vehicles, as defined in this rule, and their parts and components.

This rule applies to all commercial and non-commercial coating applications to Group I Vehicles and Equipment and Group II Vehicles and their parts and components at facilities involved in the non-assembly line production, modification, or refinishing of motor vehicles and mobile equipment. Commercial and non-commercial facilities with coating operations considered within the scope of this rule include, but are not limited to: autobody repair/paint shops, production autobody paint shops, new car dealer repair/paint shops, fleet operator repair/paint shops, custom-made car fabrication facilities, truck body-builders, and residences. Motor vehicle assembly-line coating operations are subject to Rule 1115 - Motor Vehicle Assembly Line Coating Operations, whereas the application of coatings on a vehicle which is not self-propelled, such as trailers and mobile homes, are subject to other source specific rules contained in Regulation XI.

(b) Definitions

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

(1) ADHESION PROMOTER is a coating applied over both an existing non-sanded topcoat, and the coated area immediately adjacent to the non-

sanded topcoat, to promote the adhesion of a subsequent topcoat. No topcoat, primer, primer sealer, or primer surfacer shall be classified as an adhesion promoter.

(2) AEROSOL COATING PRODUCT is 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) ANTI-GLARE SAFETY COATING is 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.

(4) BASECOAT is a pigmented topcoat which is the first topcoat applied as part of a multistage topcoat system.

(5) BASECOAT/CLEARCOAT TOPCOAT SYSTEM is a topcoat system composed of a basecoat portion and a clearcoat portion. The VOC content of a basecoat/clearcoat topcoat system shall be calculated according to the following formula:

$$VOC_{ms} = \frac{VOC_{bc} + 2\ VOC_{cc}}{3}$$

Where:

VOC_{ms} is the composite VOC content, less water and less exempt compounds to be used for compliance determination under the multistage topcoat system coating category.

VOC_{bc} is the VOC content, less water and less exempt compounds as applied, of any given basecoat.

$2\ VOC_{cc}$ is two times the VOC content, less water and less exempt compounds as applied, of any given clearcoat.

(6) BRIGHT METAL TRIM REPAIR COATING is a coating applied directly to chrome-plated metal surfaces for the purpose of appearance.

(7) BUS is 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.

(8) CLEARCOAT is a topcoat which contains no pigments or only transparent pigments and which is the final topcoat applied as a part of a multistage topcoat system.

(9) COATING is a material which is applied to a surface and which forms a film in order to beautify and/or protect such surface.

(10) ELASTOMERIC MATERIALS are coatings which are specifically formulated and applied over coated or uncoated flexible plastic substrates for the purpose of adhesion.

(11) ELECTROSTATIC APPLICATION is a method of applying coatings whereby the atomized coating droplets are charged and subsequently deposited on the substrate by electrostatic attraction.

(12) END-USER is a person who applies coatings.

(13) EXEMPT COMPOUNDS (See Rule 102-Definition of Terms).

(14) GENERAL TOPCOAT is any type of topcoat except metallic/iridescent topcoat, and any topcoat applied as part of a multistage topcoat system.

(15) 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 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 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

(16) GRAMS OF VOC PER LITER OF MATERIAL is the weight of VOC per volume of material and shall 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

(17) GROUP I VEHICLES AND EQUIPMENT are large-sized trucks, buses, and mobile equipment.

(18) GROUP II VEHICLES are passenger cars, small-sized trucks and vans, medium-sized trucks and vans, motor homes, and motorcycles.

(19) HIGH-VOLUME, LOW-PRESSURE (HVLP) SPRAY is an equipment 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.

(20) HIGHWAY is a way or place of whatever nature, publicly maintained and open to the public for purposes of vehicular travel. Highway includes street.

(21) IMPACT RESISTANT COATING is any coating applied to a rocker panel for the purpose of chip resistance to road debris.

(22) METALLIC/IRIDESCENT TOPCOAT is a topcoat which contains iridescent particles, composed of either metal as metallic particles or silicon as mica particles, in excess of 5 g/L (0.042 lb/gal) as applied, where such particles are visible in the dried film.

(23) MIDCOAT is a semi-transparent topcoat which is the middle topcoat applied as part of a three-stage topcoat system.

(24) MOBILE EQUIPMENT is self-propelled equipment which is physically capable of being driven on a highway. Mobile Equipment includes, but is not limited to: construction (mobile crane, bulldozer, concrete mixer), farming (wheel tractor, plow, pesticide sprayer), and miscellaneous (street cleaners, golf carts, hauling equipment used inside and around an airport, dock, depot, and industrial and commercial plants).

(25) MOTOR HOME is any motor vehicle originally designed, or permanently altered, and equipped for human habitation as defined in Section 362 of the California Vehicle Code.

(26) MOTOR VEHICLE is a vehicle which is self-propelled and which is physically capable of being driven on a highway.

(27) MOTORCYCLE is 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.

(28) MULTI-COLORED TOPCOAT 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.

(29) MULTI-COLORED MULTISTAGE TOPCOAT SYSTEM is a basecoat/clearcoat topcoat system in which the basecoat portion is a multi-colored topcoat.

(30) MULTISTAGE TOPCOAT SYSTEM is any basecoat/clearcoat topcoat system or any three-stage topcoat system, manufactured as a system, and used as specified by the manufacturer.

(31) PASSENGER CAR is any motor vehicle designed primarily for transportation of persons and having a design capacity of 12 persons or less.

(32) PRETREATMENT COATING is a coating which contains no more than 16 percent solids, by weight, and at least 1/2-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.

(33) PRIMER is a coating applied for purposes of corrosion resistance or adhesion of subsequent coatings.

(34) PRIMER SEALER is a coating applied prior to the application of a topcoat for the purpose of color uniformity, or to promote the ability of an underlying coating to resist penetration by the topcoat.

(35) PRIMER SURFACER is a coating applied for the purpose of corrosion resistance or adhesion, and which promotes a uniform surface by filling in surface imperfections.

(36) PROTOTYPE MOTOR VEHICLE is a motor vehicle whose design is the first of its kind and which is manufactured for public display to collect public opinion for potential assembly-line production.

(37) ROCKER PANEL is the panel area of a motor vehicle which is no more than ten inches from the bottom of a door, quarter panel or fender.

(38) RUBBERIZED ASPHALTIC UNDERBODY COATING is 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.

(39) SOLVENT CLEANING OPERATIONS is 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.

(40) SPECIALTY COATING is 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.

(41) SPOT REPAIRS are repairs to motor vehicles in which the damaged area to be repaired is limited to only a portion of any given panel so that an entire panel need not be repaired.

(42) STENCIL COATING is 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.

(43) THREE-STAGE TOPCOAT SYSTEM is a topcoat system composed of a basecoat portion, a midcoat portion and a transparent clearcoat portion. The VOC content of a three-stage topcoat system shall be calculated according to the following formula:

$$VOC_{ms} = \frac{VOC_{bc} + VOC_{mc} + 2\,VOC_{cc}}{4}$$

Where:

VOC_{ms} is the composite VOC content, less water and less exempt compounds to be used for compliance determination under the multistage topcoat system coating category.

VOC_{bc} is the VOC content, less water and less exempt compounds as applied, of any given basecoat.

VOC_{mc} is the VOC content, less water and less exempt compounds as applied, of any given midcoat.

$2\,VOC_{cc}$ is two times the VOC content, less water and less exempt compounds as applied, of any given clearcoat.

(44) TOPCOAT is a coating applied over any coating, for the purpose of appearance, identification, or protection.

(45) TOUCH-UP COATING is a coating applied by brush, air-brush, or non-refillable aerosol can to cover minor surface damage and dispensed in containers of no more than eight (8) ounces.

(46) TRANSFER EFFICIENCY is 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.

(47) TRUCK is a motor vehicle designed, used, or maintained primarily for the transportation of property.

(A) LARGE-SIZED TRUCK is a truck having a manufacturer's gross vehicle weight rating of more than 8600 pounds.

(B) MEDIUM-SIZED TRUCK is a truck having a manufacturer's gross vehicle weight of 6001 to 8600 pounds.

(C) SMALL-SIZED TRUCK is 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.

(48) UNIFORM FINISH BLENDERS are coatings which are applied in spot repairs for the purpose of blending a paint overspray area of a repaired topcoat to match the appearance of an adjacent existing topcoat.

(49) VAN is a closed truck for carrying property or persons.

(A) MEDIUM-SIZED VAN is a van having a manufacturer's gross vehicle weight rating of 6001 to 8600 pounds.

(B) SMALL-SIZED VAN is 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.

(50) VEHICLE is a device by which any person or property may be propelled, moved, or drawn upon a highway, excepting a device moved exclusively by human power or used exclusively upon stationary rails or tracks.

(51) VOLATILE ORGANIC COMPOUND (VOC) is as defined in Rule 102 – Definition of Terms. For the purpose of this rule, tertiary butyl acetate (TBAc) is not a VOC when used in coatings other than color coatings and clear coatings.

The Executive Officer shall conduct a technical assessment on the use of TBAc as a non-VOC by July 1, 2007. In conducting the technical assessment, the Executive Officer shall consider all information on TBAc including, toxicity, carcinogenic and health risk assessment studies. The Executive Office shall report to the Governing Board as to the appropriateness of maintaining TBAc as a non-VOC.

(52) WATER HOLD-OUT COATING is a coating applied to the interior cavity areas of doors, quarterpanels and rocker panels for the purpose of corrosion resistance to prolonged water exposure.

(53) WELD-THRU COATING is a coating applied to metal immediately prior to welding to provide corrosion resistance.

(c) Requirements

(1) VOC Content of Coatings

A person shall not apply a coating to Group I vehicles and equipment, and Group II vehicles, or their parts and components, which has a VOC content which exceeds the limits contained in subparagraphs (c)(1)(A) and (c)(1)(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 vehicle, mobile equipment, or parts and components.

(A) Group I Vehicles and Equipment

A person who applies coatings to Group I vehicles and equipment, or their parts or components, shall not apply a coating which has a VOC content in excess of the limits in Table 1.

TABLE 1

VOC LIMITS
Grams Per Liter of Coating,
Less Water and Exempt Compounds

COATING	On and After December 12, 1998	
	g/L	lb/gal
Pretreatment	780	6.5
Primer/Primer Surfacer/ Primer Sealer	250	2.1
Topcoats		
General	340	2.8
Metallic/Iridescent	340*	2.8*
Multi-Colored	685	5.7
Multistage	340*	2.8*
Specialty Coating	840	7.0

*The VOC limits for Metallic/Irridescent and Multistage topcoats for spot repairs on Group I vehicles and mobile equipment will be 3.5 lb/gal (less water and exempt compounds).

(B) Group II Vehicles

A person who applies coatings to Group II vehicles, or their parts or components, shall not apply a coating which has a VOC content in excess of the limits in Table 2.

TABLE 2

VOC Limits
Grams Per Liter of Coating,
Less Water and Exempt Compounds

COATING	On and After December 12, 1998		On and After July 1, 1999		On and After October 1, 1999	
	g/L	lb/gal	g/L	lb/gal	g/L	lb/gal
Pretreatment	780	6.5	780	6.5	780	6.5
Primer/Primer Surfacer	250	2.1	250	2.1	250	2.1
Primer Sealer	340	2.8	340	2.8	340	2.8
Topcoats						
General	420	3.5	420	3.5	420	3.5
Metallic/Iridescent	420	3.5	420	3.5	420	3.5
Multi-Colored	685	5.7	685	5.7	685	5.7
Multistage System						
≥ 2 gal/day[1]	540	4.5	420[1]	3.5	420	3.5
< 2 gal/day[2]	540	4.5	540[2]	4.5	420	3.5
Multi-Colored Multistage	420	3.5	420	3.5	420	3.5
Specialty Coating	840	7.0	840	7.0	840	7.0

[1] On and after July 1, 1999, any person who uses two gallons or more of combined basecoat and clearcoat, as applied, on any given day shall comply with the 420 g/L (3.5 lb/gal) limit.

[2] Any person who uses less than two gallons of combined basecoat and clearcoat, as applied, on each day up to September 30, 1999 shall comply with the 3.5 lb/gal limit on and after October 1, 1999.

(2) Exempt Compounds

A person shall not apply a coating which contains any Group II exempt compounds as defined in Rule 102 except for methylene chloride; carbon tetrachloride; perchloroethylene; or cyclic, branched, or linear, completely methylated siloxanes (VMS).

(3) Carcinogenic Materials

A person shall not apply the 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.

(4) Transfer Efficiency

(A) A person shall not apply coatings except by the use of one of the following methods:

(i) electrostatic application, or

(ii) high-volume, low-pressure (HVLP) spray, or

(iii) such other coating application methods as are demonstrated, in accordance with the provisions of subparagraph (g)(1)(E), to be capable of achieving equivalent or better transfer efficiency than the coating application method listed in clause (c)(4)(A)(ii), and for which written approval of the Executive Officer has been obtained.

(B) A person shall not apply coatings by any of the methods listed in subparagraph (c)(4)(A) unless the coating is applied with properly operating equipment, operated according to procedures recommended by the manufacturer.

(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) Approved Emission Control System

A person may comply with the provisions of paragraph (c)(1), by using an approved emission control system, consisting of collection and control devices, which is approved, in writing, by the Executive Officer for

reducing emissions of VOC. The Executive Officer shall approve such emission control system only if the VOC emissions resulting from the use of non-compliant coatings will be reduced to a level equivalent to or lower than that which would have been achieved by the compliance with the terms of paragraph (c)(1).

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:

$$C.E. = \left[1 - \left\{ \frac{(VOC_{LWc})}{(VOC_{LWn,Max})} \times \frac{1 - (VOC_{LWn,Max}/D_{n,Max})}{1 - (VOC_{LWc}/D_c)} \right\}\right] \times 100$$

Where:

C.E.	=	Control Efficiency, percent
VOC_{LWc}	=	VOC Limit of Rule 1151, less water and less exempt compounds, pursuant to paragraph (c)(1).
$VOC_{LWn,Max}$	=	Maximum VOC content of non-compliant 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 coating containing the maximum VOC.
D_c	=	Density of corresponding VOC solvent, reducer, or thinner used in the compliant coating system = 880 g/L.

(7) Alternative Emission Control Plan

A person may comply with the provisions of paragraph (c)(1) by means of an Alternative Emission Control Plan (AECP), pursuant to Rule 108.

(8) Specialty Coatings

Use of all specialty coatings shall not exceed 10 percent (by volume) of all coatings applied, averaged on a monthly (calendar) basis.

(d) Prohibition of Possession, Specification and Sale

(1) Effective July 1, 2006, no person that applies automotive coatings subject to this rule shall possess any automotive coating that is not in compliance

with requirements of paragraph (c)(1), unless one or more of the following conditions apply:

(A) The coating is located at a facility that utilizes an approved emission control device pursuant to paragraph (c)(6), and the coating meets the limits specified in permit conditions.

(B) The coating is at a facility that operates in compliance with an approved Alternative Emissions Control Plan pursuant to paragraph (c)(7), and the coating is specified in the plan.

(C) The coating is exempt pursuant to paragraph (i)(3) or (i)(5).

(2) No person shall solicit from, or require any other person to use in the District any coating which, when applied as supplied or thinned or reduced according to the manufacturer's recommendation for application, does not meet the:

(A) Applicable VOC limits required by paragraph (c)(1) for the specific application unless:

(i) The coating is located at a facility that utilizes an approved emission control device pursuant to paragraph (c)(6), and the coating meets the limits specified in permit conditions; or,

(ii) The coating is at a facility that operates in compliance approved Alternative Emissions Control Plan pursuant to paragraph (c)(7), and the coating is specified in the plan; or

(iii) the coating is specifically exempt pursuant to subdivision (i) of this rule; and

(iv) the coating meets requirements of paragraphs (c)(2) or (c)(3).

(3) No person shall offer for sale, sell, or distribute for use in the District any coating which, when applied as supplied or thinned or reduced according to the manufacturer's recommendation for application, does not meet the:

(A) applicable VOC limits required by paragraph (c)(1) for the specific application, unless:

(i) The coating is located at a facility that utilizes an approved emission control device pursuant to paragraph (c)(6), and the coating meets the limits specified in permit conditions; or,

(ii) The coating is specifically exempt pursuant to subdivision (i) of this rule; and,

(iii) The coating is at a facility that operates in compliance approved Alternative Emissions Control Plan pursuant to paragraph (c)(7), and the coating is specified in the plan; and

(iv) The person that offers for sale or distributes the coating keeps the following records for at least five years and makes them available to the Executive Officer upon request:

(I) Coating name and manufacturer;

(II) Application method;

(III) Coating category and mix ratio specific to the coating;

(IV) VOC content of the coating;

(V) Documentation that the material is a coating;

(VI) Current manufacturer specification sheets, material safety data sheets, 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) and automotive coating components and VOC content of each solvent;

(VII) Purchase records identifying the coating category, name, and volume of coatings; and

(VIII) 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.

(B) the requirements of paragraphs (c)(2) or (c)(3).

(4) No person shall solicit from, require, offer for sale to, sell to, or distribute to any other person for use in the District any coating application equipment which does not meet the requirements of subparagraph (c)(4)(A).

(5) No person shall offer for sale, sell, or distribute an HVLP spray gun unless the person offering for sale, selling, or distributing the HVLP spray gun

provides accurate information to the spray gun recipient on the maximum inlet air pressure to the spray gun which would result in a maximum 10 pounds per square inch gauge air pressure measured dynamically at the center of the air cap and the air horns. The information shall be permanently marked on the gun, or provided on the company's letterhead or in the form of technical literature which clearly identifies the spray gun manufacturer, the salesperson, or the distributor.

(6) The requirements of paragraphs (d)(1), (d)(2), (d)(3) or (d)(4) shall apply to all written or oral agreements executed and entered into under the terms of which a coating or a coating application equipment shall be used at any location within the District.

(e) Offer for Sale

(1) On and after February 1, 1999, any coating manufacturer that sells or offers for sale for use in the District clearcoat shall offer for sale at least one clearcoat product line with a VOC content of 2.1 pounds per gallon (excluding water and exempt compounds) or less, on an as applied basis, at all locations where their clearcoats are sold or offered for sale to the end users.

(2) On and after February 1, 1999, any person who sells or offers for sale to the end users a coating manufacturer’s clearcoat for use in the District shall offer for sale at least one clearcoat product line with a VOC content of 2.1 pounds per gallon (excluding water and exempt compounds) or less, on an as applied basis, offered for sale by that coating manufacturer.

(f) Recordkeeping Requirements

(1) Recordkeeping for VOC Emissions

Records of coating usage shall be maintained pursuant to Rule 109.

(2) Recordkeeping for Emission Control Systems

Any person using an emission control system as a means of complying with the provisions of paragraph (c)(1) shall maintain daily records of key system operating and maintenance procedures which will demonstrate continuous operation and compliance of the emission control system during periods of emission producing activities. Key system operating parameters are those necessary to ensure compliance with VOC limits.

The parameters include, but are not limited to, temperatures, pressures, and flowrates.

(g) Test Methods

(1) Methods of Analysis

For the purpose of this rule, the following test methods shall be used:

(A) VOC Content of Coatings

The VOC content of coatings shall be determined by the methods specified in clauses (g)(1)(A)(i) or (g)(1)(A)(ii):

(i) United States Environmental Protection Agency ("U.S. EPA") Reference Method 24, (Title 40 Code of Federal Regulations, Part 60, Appendix A). The exempt compounds content shall be determined by SCAQMD Method 303 (Determination of Exempt Compounds) contained in the SCAQMD "Laboratory Method of Analysis for Enforcement Samples" manual; or

(ii) SCAQMD Method 304 [Determination of Volatile Organic Compounds (VOCs) in Various Materials] contained in the SCAQMD "Laboratory Method of Analysis for Enforcement Samples" manual.

(iii) 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)(1), only at such time as manufacturers specify which individual compounds are used in the formulation of the coatings and identify the test methods, which have been approved by the U.S. EPA and the District prior to such analysis, that can be used to quantify the amount of each exempt compound.

(B) Determination of Iridescent Particles in Metallic/Iridescent Topcoat

The metal and silicon content of metallic/iridescent topcoat shall be determined by SCAQMD Method 311 (Determination of Percent Metal in Metallic Coatings by Spectrographic Method) contained in the SCAQMD "Laboratory Method of Analysis for Enforcement Samples" manual.

(C) Acid Content in Pretreatment Coatings

The acid content of pretreatment coatings shall be determined by ASTM Test Method D1613.

(D) Reflectance of Anti-Glare Safety Coatings

The reflectance of anti-glare safety coatings shall be measured by ASTM Test Method D-523.

(E) Transfer Efficiency

The transfer efficiency of alternative coating application methods, as defined by clause (c)(4)(A)(iii), shall be determined in accordance with the SCAQMD method "Spray Equipment Transfer Efficiency Test Procedure for Equipment User, May 24, 1989."

(F) Equivalent Test Methods

Other test methods may also be used for method of analysis if approved in writing by the Executive Officer, the California Air Resources Board ("CARB"), and the U.S. EPA.

(2) Determination of Efficiency of Emission Control Systems

(A) The efficiency of the collection device of an emission control system as specified in paragraph (c)(6) shall be determined by the methods specified in clauses (g)(2)(A)(i), (g)(2)(A)(ii), or (g)(2)(A)(iii).

(i) U.S. EPA method cited in 55 Federal Register (FR) 26865, June 29, 1990; or

(ii) The SCAQMD "Protocol for Determination of Volatile Organic Compounds (VOC) Capture Efficiency"; or

(iii) Any other method approved by the Executive Officer, CARB and U.S. EPA.

(B) The efficiency of the control device of an emission control system as specified in paragraph (c)(6) and the VOC content in the control device exhaust gases, measured and calculated as carbon, shall be determined by U.S. EPA Test Methods 25, 25A, or SCAQMD Method 25.1 (Determination of Total Gaseous Non-Methane

Organic Emissions as Carbon) as applicable. U.S. EPA Test Method 18, or CARB Method 422 shall be used to determine emissions of exempt compounds.

(3) 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.

(h) Rule 442 Applicability

Any coating operation, subject to this rule which is exempt from all or a portion of the VOC limits of this rule shall comply with the provisions of Rule 442.

(i) Exemptions

(1) The provisions of paragraph(c)(4) of this rule shall not apply to:

(A) touch-up coatings.

(B) stencil coatings.

(2) The prohibition specified in subdivision (d) shall not apply to coatings or spray equipment which will be used solely outside of the District.

(3) The requirements of paragraph (c)(1) 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 paragraph (c)(1) do not exceed twelve (12) pounds per day.

(4) The provisions of this rule shall not apply to aerosol coating products.

(5) The requirements of paragraphs (c)(1), (d)(1), (d)(2), and (d)(3) shall not apply to topcoats supplied by an assembly-line motor vehicle manufacturer for use by a prototype motor vehicle manufacturing facility in the finishing of a prototype motor vehicle, provided that the VOC emissions at the prototype motor vehicle manufacturing facility from such topcoats does not exceed 21 pounds in a calendar day and 930 pounds in a calendar year.

(6) The requirements of paragraph (e)(1) shall not apply to coating manufacturers that only sell or offer for sale for use in the District clearcoat that is formulated and recommended for use in conjunction with only waterborne-basecoats.

(7) The requirements of paragraph (e)(2) shall not apply to a coating manufacturer's clearcoats which are formulated and recommended for use in conjunction with only waterborne basecoats.

Appendix A

Rule 1151 – Effective July 1, 2008

Effective July 1, 2008, the provisions in subdivisions (a) through (i) of this appendix shall become effective and replace subdivisions (a) through (i) of Rule 1151

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(a) Purpose

The purpose of this rule is to limit volatile organic compound (VOC), stratospheric ozone-depleting compound, and global-warming compound emissions from coatings operations associated with the coating of motor vehicles and mobile equipment.

(b) Applicability

This rule is applicable to any person who supplies, sells, offers for sale, manufactures, or distributes any automotive coating or associated solvent for use within the District, as well as any person who uses, applies, or solicits, the use or application of any automotive coating or associated solvent within the District.

(c) Definitions

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

(1) ADHESION PROMOTER means 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 means 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.

(3) ASSEMBLY LINE means 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.

(4) ASSOCIATED PARTS AND COMPONENTS means structures, devices, pieces, modules, sections, assemblies, subassemblies, or elements of motor vehicles or mobile equipment that are designed to be a 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.

(5) AUTOMOTIVE COATING means any coating or 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.

(6) AUTOMOTIVE COATING COMPONENT means 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 used in an automotive coating. The raw materials used to produce the components are not considered automotive coating components.

(7) AUTOMOTIVE REFINISHING FACILITY means 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.

(8) CARB means the California Air Resources Board.

(9) CLEANING OPERATIONS means 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.

(10) CLEAR COATING means any coating that contains no pigments and is labeled and formulated for application over a color coating or clear coating.

(11) COATING means a material which is applied to a surface and forms a film in order to beautify, preserve, repair, or protect such a surface.

(12) COLOR COATING means any pigmented coating, excluding adhesion promoters, primers, and multi-color coatings, that requires a subsequent clear coating and which is applied over a primer or adhesion promoter. Color coatings include metallic/iridescent color coatings.

(13) ELECTROSTATIC SPRAY APPLICATION means any method of spray application of coatings where an electrostatic attraction is created between the part to be coated and the paint particles.

(14) EMISSION CONTROL SYSTEM means any combination of capture systems and control devices used to reduce VOC emissions from automotive coating operations.

(15) EXEMPT COMPOUNDS are as defined in Rule 102-Definition of Terms.

(16) 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 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 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

(17) GRAMS OF VOC PER LITER OF MATERIAL is the weight of VOC per volume of material and shall 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

(18) HIGH-VOLUME, LOW-PRESSURE (HVLP) means spray equipment permanently labeled HVLP 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.

(19) METALLIC/IRIDESCENT COLOR COATING means any coating that contains more than 0.042 pounds per gallon (5 grams per liter) of metal or iridescent particles as applied, where such particles are visible in the dried film.

(20) MOBILE EQUIPMENT means any device that may be drawn and/or driven on rails or a roadway including, but not limited to, trains, railcars, truck trailers, mobile cranes, bulldozers, street cleaners, and implements of husbandry or agriculture.

(21) MOTOR VEHICLE means any self-propelled vehicle, including, but not limited to, cars, trucks, buses, golf carts, vans, motorcycles, tanks, and armored personnel carriers.

(22) MULTI-COLOR COATING means 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.

(23) PRETREATMENT COATING means any coating that contains a minimum of one-half (0.5) percent acid by weight and not more than 16 percent solids by weight necessary to provide surface etching and is labeled and formulated for application directly to bare metal surfaces to provide corrosion resistance and adhesion.

(24) PRIMER means 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.

(25) SINGLE-STAGE COATING means 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.

(26) SPOT REPAIR means repair of an area on a motor vehicle, piece of mobile equipment, or associated parts or components of less than 1 square foot (929 square centimeters).

(27) TEMPORARY PROTECTIVE COATING means any coating which is labeled and formulated for the purpose of temporarily protecting areas from overspray or mechanical damage.

(28) TRANSFER EFFICIENCY means the amount of coating solids adhering to the object being coated divided by the total amount of coating solids sprayed, expressed as a percentage.

(29) TRUCK BED LINER COATING means any coating, excluding color, multi-color, and single stage coatings, labeled and formulated for application to a truck bed to protect it from surface abrasion.

(30) UNDERBODY COATING means 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.

(31) UNIFORM FINISH COATING means 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.

(32) U.S. EPA means the United States Environmental Protection Agency.

(33) VOLATILE ORGANIC COMPOUND (VOC) is as defined in Rule 102-Definition of Terms. For the purpose of this rule, tertiary butyl acetate (TBAc) is not a VOC when used in coatings other than color coatings and clear coatings.

The Executive Officer shall conduct a technical assessment on the use of TBAc as a non-VOC by July 1, 2007. In conducting the technical assessment, the Executive Officer shall consider all information on TBAc including, toxicity, carcinogenic and health risk assessment studies. The Executive Office shall report to the Governing Board as to the appropriateness of maintaining TBAc as a non-VOC.

(d) Requirements

(1) A person shall not apply any coating to a vehicle, mobile equipment, or associated parts or components, that have a VOC content in excess of the limits contained in Table A of this paragraph. 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 vehicle, mobile equipment or parts and components.

Table A – Coating Categories and VOC limits

Coating Categories	**VOC Limits Less Water and Less Exempt Compounds Effective Dates**					
	July 1, 2008		**January 1, 2009**		**January 1, 2010**	
	g/L	**lb/gal**	**g/L**	**lb/gal**	**g/L**	**lb/gal**
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
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 Finishing Coating			540	4.5		
Any other coating type			250	2.1		

(2) Most Restrictive VOC Limit

If any representation on information on the container of any automotive coating, or any label or sticker affixed to the container, or in any sales, advertising, or technical literature supplied by a person that indicates that the coating meets the definition of or is recommended for use for more than one of the coating categories listed in paragraph (d)(1), then the lowest VOC content limit shall apply.

(3) VOC Limits Compliance Dates

The VOC limits in effect as of December 2, 2005 shall be applicable until superceded by the VOC limits and effectives dates in Table A of paragraph (d)(1).

(4) Alternative Compliance

(A) Emission Control System

A person may comply with the provisions of paragraph (d)(1), by using an approved emission control system, consisting of collection and control devices, that is approved, in writing, by the Executive Officer for reducing emissions of VOC. The Executive Officer shall approve such emission control system only if the VOC emissions resulting from the use of non-compliant coatings will be reduced to a level equivalent to or lower than that which would have been achieved by the compliance with the terms of paragraph (d)(1). 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:

$$\text{C.E.} = \left[1 - \left\{ \frac{(VOC_{LWc})}{(VOC_{LWn,Max})} \times \frac{1 - (VOC_{LWn,Max}/D_{n,Max})}{1 - (VOC_{LWc}/D_c)} \right\}\right] \times 100$$

Where:

C.E.	=	Control Efficiency, percent
VOC_{LWc}	=	VOC Limit of Rule 1151, less water and less exempt compounds, pursuant to paragraph (d)(1).
$VOC_{LWn,Max}$	=	Maximum VOC content of non-compliant 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 coating containing the maximum VOC.
D_c	=	Density of corresponding VOC solvent, reducer, or thinner used in the compliant coating system = 880 g/L.

(B) Alternative Emission Control Plan

A person may comply with the provisions of paragraph (d)(1) by means of an Alternative Emissions Control Plan, pursuant to Rule 108 – Alternative Emissions Control Plans.

(5) Exempt Compounds

A person shall not manufacture, sell, offer for sale, distribute for use in the District, or apply any coating which contains any Group II Exempt Compounds as defined in Rule 102.

(6) Carcinogenic Materials

A person shall not manufacture the 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.

(7) Transfer Efficiency

(A) A person shall not apply coatings except by the use of one of the following methods:

(i) electrostatic application, or

(ii) high-volume, low-pressure (HVLP) spray, or

(iii) such other coating application methods as are demonstrated, in accordance with the provisions of subparagraph (h)(1)(E), to be capable of achieving equivalent or better transfer efficiency than the coating application method listed in clause (d)(6)(A)(ii), and for which written approval of the Executive Officer has been obtained.

(B) A person shall not apply coatings by any of the methods listed in subparagraph (d)(6)(A) unless the coating is applied with properly operating equipment, operated according to procedures recommended by the manufacturer and in compliance with permit conditions, if any.

(8) Solvent Cleaning, 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 SCAQMD Rule 1171 – Solvent Cleaning Operations.

(e) Prohibition of Possession, Specification and Sale

(1) No person that applies automotive coatings subject to this rule shall posses any automotive coating that is not in compliance with requirements of paragraph (d)(1), unless one or more of the following conditions apply:

(A) The coating is located at a facility that utilizes an approved emission control device pursuant to subparagraph (d)(4)(A), and the coating meets the limits specified in permit conditions.

(B) The coating is located at a facility that operates in compliance with an approved Alternative Emissions Control Plan pursuant to subparagraph (d)(4)(B), and the coating is specified in the plan

(C) 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 the VOC limits of paragraph (d)(1) do not exceed twelve (12) pounds per day.

(D) The topcoat is located at 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 paragraph (d)(1) do not exceed twenty-one (21) pounds per day and 930 pounds in any one calendar year.

(2) No person shall solicit from, or require any other person to use in the District any coating which, when applied as supplied or thinned or reduced according to the manufacturer's recommendation for application, does not meet the:

(A) applicable VOC limits required by paragraph (d)(1) for the specific application unless:

(i) The coating is located at a facility that utilizes an approved emission control device pursuant to subparagraph (d)(4)(A), and the coating meets the limits specified in permit conditions; or,

(ii) The coating is coating is located at a facility that operates in compliance with an approved Alternative Emissions Control Plan pursuant to subparagraph (d)(4)(B), and the coating is specified in the plan; or

(ii) the coating is specifically exempt pursuant to subdivision (i) of this rule.

(B) the requirements of paragraphs (d)(5) and (d)(6).

(3) No person shall offer for sale, sell, or distribute for use in the District any coating which, when applied as supplied or thinned or reduced according to the manufacturer's recommendation for application, does not meet the:

(A) Applicable VOC limits required by paragraph (d)(1) for the specific application, unless:

(i) The coating is located at a facility that utilizes an approved emission control device pursuant to subparagraph (d)(4)(A), and the coating meets the limits specified in permit conditions; or,

(ii) The coating is specifically exempt under subdivision (i) of this rule; or,

(iii) The coating is coating is located at a facility that operates in compliance with an approved Alternative Emissions Control Plan pursuant to subparagraph (d)(4)(B), and the coating is specified in the plan; and,

(iv) The person that offers for sale or distributes the coating keeps the following records for at least five years and makes them available to the Executive Officer upon request:

(I) Coating name and manufacturer;

(II) Application method;

(III) Coating category and mix ratio specific to the coating;

(IV) VOC content of the coating;

(V) Documentation that the material is a coating;

(VI) Current manufacturer specification sheets, material safety data sheets, 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) and automotive coating components and VOC content of each solvent;

(VII) Purchase records identifying the coating category, name, and volume of coatings; and

(VIII) 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.

(B) or does not meet the requirements of paragraphs (d)(5) and (d)(6).

(4) No person shall solicit from, require, offer for sale to, sell to, or distribute to any other person for use in the District any coating application equipment which does not meet the requirements of subparagraph (d)(7)(A).

(5) No person shall offer for sale, sell, or distribute an HVLP spray gun unless the person offering for sale, selling, or distributing the HVLP spray gun provides accurate information to the spray gun recipient on the maximum inlet air pressure to the spray gun which would result in a maximum 10 pounds per square inch gauge air pressure measured dynamically at the center of the air cap and the air horns. The information shall be permanently marked on the gun, or provided on the company's letterhead or in the form of technical literature which clearly identifies the spray gun manufacturer, the salesperson, or the distributor.

(6) The requirements of paragraphs (e)(1), (e)(2), (e)(3) or (e)(4) shall apply to all written or oral agreements executed and entered into under the terms of which a coating or a coating application equipment shall be used at any location within the District.

(f) Recordkeeping Requirements

(1) Recordkeeping for VOC Emissions

Records of coating usage shall be maintained pursuant to SCAQMD Rule 109 – Recordkeeping for Volatile Organic Compound Emissions, and shall at a minimum include the following information:

(A) Material name and manufacturer;

(B) Application method;

(C) Coating category and mix ratio specific to the coating;

(D) VOC actual and regulatory for the coating;

(E) Documentation that the material is a coating or solvent;

(F) Current manufacturer specification sheets, material safety data sheets, technical data sheets, or air quality data sheets, which list

the VOC actual for coatings and VOC regulatory for coatings of each ready-to-spray coating (based on the manufacturer's stated mix ratio) and automotive coating components and VOC content of each solvent; and,

(G) Purchase records identifying the coating category, name, and volume of coatings and solvents.

(2) Recordkeeping Requirements for Emission Control System

Any person using an emission control system shall maintain daily records of key system operating parameters which will demonstrate continuous operation and compliance of the emission control system during periods of VOC emission producing activities. "Key system operating parameters" are those parameters necessary to ensure or document compliance with subparagraph (d)(3)(A), including, but not limited to, temperatures, pressure drops, and air flow rates.

(g) Administrative Requirements for Coating Manufacturers

(1) Compliance Statement Requirement

For each individual automotive coating, coating component, and ready to spray mixture (based on the manufacturers stated mix ratio), the manufacturer shall include the following information on a product data sheet, or an equivalent medium:

(A) The actual and regulatory VOC for coatings (in grams per liter);

(B) The weight percentage of volatiles, water, and exempt compounds; and,

(C) The density of the material (in grams per liter).

(2) Labeling Requirements

(A) The manufacturer of automobile coatings or coating components shall include on all containers the applicable use category(ies), and the VOC actual and regulatory for coatings, as supplied (in grams per liter).

(B) The manufacturer of solvents subject to this rule shall include on all containers the VOC content for solvents, as supplied (in grams per liter).

(h) Test Methods

(1) Methods of Analysis

For the purpose of this rule, the following test methods shall be used:

(A) VOC Content of Coatings

United States Environmental Protection Agency ("U.S. EPA") Reference Method 24, (Title 40 Code of Federal Regulations, Part 60, Appendix A). The exempt compounds content shall be determined by SCAQMD Method 303 (Determination of Exempt Compounds) contained in the SCAQMD "Laboratory Method of Analysis for Enforcement Samples" manual; or SCAQMD Method 304 [Determination of Volatile Organic Compounds (VOCs) in Various Materials] contained in the SCAQMD "Laboratory Method of Analysis for Enforcement Samples" manual.

(B) 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, shall be analyzed as exempt compounds for compliance with paragraph (d)(1), only at such time as manufacturers specify which individual compounds are used in the formulation of the coatings and identify the test methods, which have been approved by the U.S. EPA and the District prior to such analysis, that can be used to quantify the amount of each exempt compound.

(C) Determination of Iridescent Particles in Metallic/Iridescent Coatings

The metal and silicon content of metallic/iridescent coatings shall be determined by SCAQMD Method 311 (Determination of Percent Metal in Metallic Coatings by Spectrographic Method) contained in the SCAQMD "Laboratory Method of Analysis for Enforcement Samples" manual.

(D) Acid Content in Pretreatment Coatings

The acid content of pretreatment coatings shall be determined by ASTM Test Method D1613.

(E) Reflectance of Anti-Glare Safety Coatings

The reflectance of anti-glare safety coatings shall be measured by ASTM Test Method D-523.

(F) Transfer Efficiency

The transfer efficiency of alternative coating application methods, as defined by clause (d)(7)(A)(iii), shall be determined in accordance with the SCAQMD method "Spray Equipment Transfer Efficiency Test Procedure for Equipment User, May 24, 1989," and SCAQMD "Guidelines for Demonstrating Equivalency With District Approved Transfer Efficiency Spray Gun September 26, 2002."

(G) Equivalent Test Methods

Other test methods determined to be equivalent after review by the staffs of the District, CARB, and the U.S. EPA, and approved in writing by the District Executive Officer may also be used for methods of analysis.

(2) Determination of Efficiency of Emission Control Systems

(A) The efficiency of the collection device of an emission control system as specified in subparagraph (d)(4)(A) shall be determined by the methods specified in clauses (h)(2)(A)(i), (h)(2)(A)(ii), or (h)(2)(A)(iii).

(i) U.S. EPA method cited in 55 Federal Register (FR) 26865, June 29, 1990; or

(ii) SCAQMD's "Protocol for Determination of Volatile Organic Compounds (VOC) Capture Efficiency"; or

(iii) any other method approved by the United States Environmental Protection Agency, the California Air Resources Board, and the District Executive Officer.

(B) The efficiency of the control device of an emission control system as specified in subparagraph (d)(4)(A) 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. U.S. EPA Test Method 18, or CARB Method 422 shall be used to determine emissions of exempt compounds.

(3) 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 documentation by

any one of the specified test methods or set of test methods shall constitute a violation of the rule.

(i) Exemptions

(1) This rule shall not apply to:

(A) Any coating applied to motor vehicles 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 aerosol coating product;

(D) Any automotive coating that is sold, supplied, or offered for sale in 0.5 fluid ounces or smaller containers.

(2) The requirements of paragraph (d)(1) 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 paragraph (d)(1) does not exceed twelve (12) pounds per day.

(3) The requirements of paragraph (d)(1) shall not apply to coatings supplied by an assembly-line motor vehicle manufacturer for use by a prototype motor vehicle manufacturing facility in the finishing of a prototype motor vehicle, provided that the VOC emissions at the prototype motor vehicle manufacturing facility from such topcoats does not exceed 21 pounds in a calendar day and 930 pounds in a calendar year.

(4) Color and clear coatings that are manufactured prior to the effective date of July 1, 2008, that have a VOC content above the limit specified in Table A of paragraph (d)(1), but not above the applicable limit on the date of manufacture may be possessed, sold, supplied, offered for sale, or applied up to December 31, 2008.

Deleted: ,

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

(Adopted November 7, 2014)

RULE 1153.1 EMISSIONS OF OXIDES OF NITROGEN FROM COMMERCIAL FOOD OVENS

(a) Purpose and Applicability

The purpose of this rule is to reduce nitrogen oxide emissions from gaseous and liquid fuel-fired combustion equipment as defined in this rule. This rule applies to in-use ovens, dryers, smokers, and dry roasters with nitrogen oxide (NOx) emissions from fuel combustion that require South Coast Air Quality Management District (SCAQMD) permits and are used to prepare food or products for making beverages for human consumption. As of November 7, 2014, the equipment subject to this rule is no longer subject to SCAQMD Rule 1147 except for the compliance determination option set forth in Rule 1147 (d)(7).

(b) Definitions

(1) ANNUAL HEAT INPUT means the amount of heat released by fuels burned in a burner or unit during a calendar year, based on the fuel's higher heating value.

(2) BTU means British thermal unit(s).

(3) COMBUSTION MODIFICATION means replacement of a burner, burners, fuel or combustion air delivery system(s), or burner control system(s).

(4) COMBUSTION SYSTEM means a specific combination of burner, fuel supply, combustion air supply, and control system components as identified in a permit application to the SCAQMD, application for certification pursuant to subdivision (e) of this rule, or SCAQMD permit, if applicable.

(5) FOOD OVEN means an oven used to heat, cook, dry, or prepare food or products for making beverages for human consumption.

(6) GASEOUS FUEL means natural gas; compressed natural gas (CNG); liquefied petroleum gases (LPG), including but not limited to propane and butane; synthetic natural gas (SNG); or other fuel that is a gas at ambient temperature and atmospheric pressure.

(7) HEAT INPUT means the higher heating value of the fuel to the burner or UNIT measured as BTU per hour.

(8) HEAT OUTPUT means the enthalpy of the working fluid output of a burner or UNIT.

(9) INFRARED BURNER means a burner with ceramic, metal fiber, sintered metal, or perforated metal flame-holding surface; with more than 50% of the heat output as infrared radiation; that is operated in a manner where the zone including and above the flame-holding surface is red and does not produce observable blue or yellow flames in excess of ½ inch (13 mm) in length; and with a RATED HEAT INPUT CAPACITY per square foot of flame holding surface of 100,000 BTU per hour or less.

(10) IN-USE UNIT means any UNIT that is demonstrated to the Executive Officer that it was in operation at the current location prior to November 7, 2014.

(11) NOx EMISSIONS means the sum of nitrogen oxide and nitrogen dioxide in flue gas, collectively expressed as nitrogen dioxide.

(12) PROTOCOL means a SCAQMD approved set of test procedures for determining compliance with emission limits for applicable equipment.

(13) RADIANT TUBE HEATING means an indirect heating system with a tube or tubes; with burner(s) that fire(s) within the tube(s); and where heat is transferred by conduction, radiation, and convection from the burner flame and combustion gases to the tube(s) and the heat is then transferred to the process by radiation and convection from the heated tube(s) without any direct contact of process materials with burner flames and combustion gasses.

(14) RATED HEAT INPUT CAPACITY means the gross HEAT INPUT of the combustion UNIT specified on a permanent rating plate attached by the manufacturer to the device. If the UNIT or COMBUSTION SYSTEM has been altered or modified such that its gross HEAT INPUT is higher or lower than the rated HEAT INPUT capacity specified on the original manufacturer's permanent rating plate, the modified gross HEAT INPUT shall be considered as the RATED HEAT INPUT CAPACITY.

(15) RESPONSIBLE OFFICIAL means:

(A) For a corporation: a president or vice-president of the corporation in charge of a principal business function or a duly authorized person who performs similar policy-making functions for the corporation; or

(B) For a partnership or sole proprietorship: general partner or proprietor, respectively;

(C) For a government agency: a duly authorized person.

(16) ROASTER means an oven used to dry roast nuts, coffee beans, or other plant seeds. ROASTER includes coffee roasting units with an integrated afterburner that is the only heat source, which also provides heat to roast the coffee beans.

(17) THERM means 100,000 BTU.

(18) UNIT means any oven, dryer, smoker, or ROASTER requiring a SCAQMD permit and used to prepare food or products for making beverages for human consumption.

(c) Requirements

(1) In accordance with the compliance schedule in Table 2, any person owning or operating an in-use unit subject to this rule shall not operate the unit in a manner that exceeds carbon monoxide (CO) emissions of 800 ppm by volume, referenced to 3% oxygen (O2), and the applicable nitrogen oxide emission limit specified in Table 1.

Table 1 – NO_x Emission Limit for In-Use Units

NOx Emission Limit PPM @ 3% O_2, dry or Pound/mmBTU heat input	
Process Temperature	
≤ 500° F	*> 500° F*
40 ppm or 0.042 lb/mmBTU	60 ppm or 0.073 lb/mmBTU

Table 2 – Compliance Schedule for In-Use Units

Equipment Category(ies)	Permit Application Shall be Submitted By	Unit Shall Be in Compliance On and After
Ovens used solely for making pita bread manufactured prior to 1999	October 1, 2017	July 1, 2018
Griddle ovens manufactured prior to 1999	October 1, 2017	July 1, 2018
Ovens heated solely by indirect-fired radiant tubes manufactured prior to 2002	October 1, 2021	July 1, 2022
Other unit manufactured prior to 1992	October 1, 2015	July 1, 2016
Other unit manufactured from 1992 through 1998	October 1, 2018	July 1, 2019
Ovens heated solely by indirect-fired radiant tubes manufactured after 2001 and any other unit manufactured after 1998	October 1 of the year prior to the compliance date	July 1 of the year the unit is 20 years old

(2) Unit age shall be based on:

(A) The original date of manufacture of the unit as determined by:

(i) Original manufacturer's identification or rating plate permanently fixed to the equipment. If not available, then:

(ii) Invoice from manufacturer or distributor for purchase of equipment. If not available, then:

(iii) Information submitted to SCAQMD with prior permit applications for the specific unit sufficient to establish the manufacture date. If not available, then:

(iv) Unit shall be deemed by SCAQMD to be 20 years old.

(3) Owners or operators of units shall determine compliance with the emission limit specified in Table 1 pursuant to the provisions of subdivisions (d) or (e) using a SCAQMD approved test protocol. The test protocol shall be submitted to the SCAQMD at least 150 days prior to the scheduled test and approved by the SCAQMD Source Testing Division.

(4) Identification of Units

(A) Unmodified Units

The owner or operator shall display the model number and the rated heat input capacity of the unit complying with subdivision (c) on a permanent rating plate. The owner or operator shall also display the SCAQMD certification status on the unit when applicable.

(B) Modified Units

The owner or operator of a unit with a combustion modification shall display the modified rated heat input capacity for the unit and individual burners on new permanent supplemental rating plates installed in an accessible location on the unit and every burner. The gross heat input shall be defined by the maximum fuel input corrected for fuel heat content, temperature, and pressure. Gross heat input shall be demonstrated by a calculation based on fuel consumption recorded by an in-line fuel meter. The permanent supplemental rating plates shall include the date the unit and burners were modified and the date any replacement burners were manufactured. The documentation of rated heat input capacity for modified units shall include the name of the company and person modifying the unit, a description of all modifications, the dates the unit was modified, and calculation of rated heat input capacity. The documentation for modified units shall be signed by the highest ranking person modifying the unit.

(5) The owner or operator shall maintain on site a copy of all documents identifying the unit's rated heat input capacity. The rated heat input capacity shall be identified by a manufacturer's or distributor's manual or invoice and permanent rating plates attached to the unit and individual burners pursuant to paragraph (c)(4).

(6) On or after November 7, 2014, any person owning or operating a unit subject to this rule shall perform combustion system maintenance in accordance with the manufacturer's schedule and specifications as identified in the manual or other written materials supplied by the manufacturer or distributor. The owner or operator shall maintain on site at the facility where the unit is being operated a copy of the manufacturer's, distributor's, installer's, or maintenance company's written maintenance schedule and instructions and retain a record of the maintenance activity for a period of not less than three years. The owner or operator shall maintain on site at the facility where the unit is being operated a copy of the SCAQMD certification or SCAQMD approved source test reports, conducted by an independent third party, demonstrating that the specific unit complies with the emission limit. The source test report(s) must identify that the source test was conducted

pursuant to a SCAQMD approved protocol. The model and serial numbers of the specified unit shall clearly be indicated on the source test report(s). The owner or operator shall maintain on the unit in an accessible location a permanent or permanent supplemental rating plate. The maintenance instructions, maintenance records, and the source test report(s) or SCAQMD certification shall be made available to the Executive Officer upon request.

(7) Any person owning or operating a unit subject to this rule complying with an emission limit in Table 1 expressed as pounds per million BTU shall install and maintain in service non-resettable, totalizing fuel meters for each unit's fuel(s) prior to the compliance determination specified in paragraph (c)(3). Owners or operators of a unit with a combustion system that operates at only one firing rate that complies with an emission limit using pounds per million BTU shall install a non-resettable, totalizing time or fuel meter for each fuel.

(8) Unit fuel and electric use meters that require electric power to operate shall be provided a permanent supply of electric power that cannot be unplugged, switched off, or reset except by the main power supply circuit for the building or the unit's safety shut-off switch. Any person owning or operating a unit subject to this rule shall not shut off electric power to a unit meter unless the unit is not operating or is shut down for safety.

(9) Compliance by Certification

For units that do not allow adjustment of the fuel and combustion air for the combustion system by the owner or operator, and upon approval by the Executive Officer, an owner or operator may demonstrate compliance with the emission limit and demonstration requirement of this subdivision by certification granted to the manufacturer for any model of unit or specific combustion system sold for use in the SCAQMD. Any unit or combustion system certified pursuant to subdivision (e) shall be deemed in compliance with the emission limit in Table 1 of paragraph (c)(1) and demonstration requirement of paragraph (c)(3) of this subdivision, unless a SCAQMD conducted or required source test shows non-compliance.

(10) Alternate Compliance Plan For Multiple Units

Owners or operators of facilities with three or more in-use units with compliance dates in the same year or two consecutive years may request a delay and phase-in of the compliance dates in Table 2 for the affected units. The term of the alternate compliance plan shall be no more than 3 years for 3 or 4 units and no more than 5 years for 5 or more units. At least one unit shall comply with the applicable emission limit by July 1 of the first applicable compliance date specified in Table 2 for the affected units and at least one unit shall comply with the applicable emission limit by July 1 of each year thereafter. The alternate compliance plan shall identify the units included in the plan and commit to a schedule showing when the compliance testing for each unit will be completed and when each unit will demonstrate compliance with the emission limit. All owners or operators of these units shall demonstrate compliance with the applicable emission limit of this rule in accordance with the schedule in the plan and before the end of the term of the alternate compliance plan. The alternate compliance plan submitted pursuant to this paragraph shall include:

(A) A cover letter submitted to the SCAQMD identifying that the application is for a Rule 1153.1 (c)(10) Alternate Compliance Plan for Multiple Units and signed by the responsible official;

(B) A completed SCAQMD Form 400A with company name, SCAQMD Facility ID, identification that the application is for a compliance plan (section 7 of form), identification that the request is for a Rule 1153.1 (c)(10) Alternate Compliance Plan for Multiple Units (section 9 of the form), and signature of the responsible official;

(C) Documentation of the applicable units' permit IDs, equipment descriptions, and heat ratings (BTU/hour), and the proposed alternate compliance schedule;

(D) Filing fee payment (Rule 306 (c)); and

(E) Initial plan evaluation fee payment (Rule 306 (i)(1)).

(11) Compliance Plan for Burner Replacement Prior to Rule Adoption

Notwithstanding the requirements of paragraph (c)(1), units with combustion modifications completed prior to November 7, 2014 that resulted in replacement of 100% of the unit's burners during a one time

period of less than 31 consecutive days, shall comply with the applicable emission limit specified in Table 1 of paragraph (c)(1) on either (1) July 1 of the year the modification is ten years old if the unit operates no more than 8 hours per day on all days of operation or (2) July 1 of the year the modification is 5 years old if the unit operates greater than 8 hours on any day. The hours of operation shall be documented by daily recordkeeping starting January 1, 2015 or the date the plan is submitted, whichever is earlier. To qualify for this time extension, the owner/operator must submit an alternate compliance plan to the SCAQMD no later than 90 days after November 7, 2014 with documentation of the purchase, replacement, and identification of each new burner installed. The alternate compliance plan submittal to the SCAQMD shall include:

(A) A letter submitted to the SCAQMD stating the application is for a Rule 1153.1 (c)(11) Burner Replacement Prior to Rule Adoption Alternate Compliance Plan; identifying the applicable unit, unit permit ID, dates the emissions test protocol and emissions test results shall be submitted to the SCAQMD, and proposed alternate compliance schedule (5 or 10 years) with beginning and ending dates; and signed by the responsible official;

(B) A completed SCAQMD form 400A with company name, identification that application is for an alternate compliance plan (section 7 of form), identification that the request is for the Rule 1153.1 (c)(11) Burner Replacement Prior to Rule Adoption Compliance Plan (section 9 of form), and signature of the responsible official;

(C) Documentation of the date of replacement of the burners with invoices for burner purchase, burner installation, and tuning, and a listing of each new burner installed in the unit with each burner's manufacturer, model number, serial number, date of manufacture on burner rating plate or date stamp on burner, and each burner's rated heat input capacity;

(D) Documentation of the applicable unit's permit ID, description, and heat rating (BTU/hour);

(E) Filing fee payment (Rule 306 (c)); and

(F) Initial plan evaluation fee payment (Rule 306 (i)(1)).

(12) Owners or operators of units operating with an alternate compliance plan pursuant to paragraph (c)(11) shall install, prior to submittal of the compliance plan application, a non-resettable time meter on the applicable unit and document and maintain records of unit use every day of operation for the duration of the alternate compliance plan.

(13) Owners or operators of units operating with an alternate compliance plan pursuant to paragraph (c)(11) that replace more than 50% of the burners identified in the alternate compliance plan more than 365 days before the ending date of the alternate compliance plan shall submit an emissions testing protocol for the applicable unit to the SCAQMD within 30 days of the date when more than 50% of the burners are replaced. Owners and operators of these units shall conduct emissions testing and demonstrate compliance with the emission limits in Table 1 of paragraph (c)(1) within 270 days of the date they replace more than 50% of the burners identified in the alternate compliance plan.

(d) Compliance Determination

(1) All compliance determinations pursuant to paragraphs (c)(1), (c)(3), (c)(9), (c)(10) and this subdivision shall be calculated:

(A) Using a SCAQMD approved test protocol averaged over a period of at least 15 and no more than 60 consecutive minutes; and

(B) After unit start up.

Each compliance determination shall be made in the maximum heat input range at which the unit normally operates. An additional compliance determination shall be made using a heat input of less than 35% of the rated heat input capacity.

For compliance determinations after the initial approved test, the owner or operator is not required to resubmit a protocol for approval if: there is a previously approved protocol and the unit has not been altered in a manner that requires a permit alteration, and rule or permit emission limits have not changed since the previous test.

(2) All parts per million emission limits specified in subdivision (c) shall be referenced at 3 percent volume stack gas oxygen on a dry basis.

(3) Compliance with the NO_X and CO emission limits of subdivision (c) and determination of stack-gas oxygen and carbon dioxide concentrations for this rule shall be determined according to the following procedures:

(A) SCAQMD Source Test Method 100.1 – Instrumental Analyzer Procedures for Continuous Gaseous Emission Sampling (March 1989);

(B) ASTM Method D6522-00 – Standard Test Method for Determination of Nitrogen Oxides, Carbon Monoxide, and Oxygen Concentrations in Emissions from Natural Gas-Fired Reciprocating Engines, Combustion Turbines, Boilers, and Process Heaters Using Portable Analyzers;

(C) United States Environmental Protection Agency Conditional Test Method CTM-030 – Determination of Nitrogen Oxides, Carbon Monoxide, and Oxygen Emissions from Natural Gas-Fired Engines, Boilers and Process Heaters Using Portable Analyzers;

(D) SCAQMD Source Test Method 7.1 – Determination of Nitrogen Oxide Emissions from Stationary Sources (March 1989);

(E) SCAQMD Source Test 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);

(F) Any alternative test method determined approved before the test in writing by the Executive Officers of the SCAQMD, and the California Air Resources Board, and by the United States Environmental Protection Agency.

(4) For any owner or operator who chooses to comply using pound per million BTU, 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.

(5) Records of source tests shall be maintained on site and made available to SCAQMD personnel upon request. Emissions determined to exceed any limits established by this rule through the use of any of the test methods specified in subparagraphs (d)(3)(A) through (d)(3)(F) and paragraph (d)(4) shall constitute a violation of this rule.

(6) All compliance determinations shall be made by SCAQMD or using an independent contractor to conduct testing, which is approved by the Executive Officer under the Laboratory Approval Program for the applicable test methods.

(7) For equipment with two or more units in series or multiple units with a common exhaust, the owner or operator may demonstrate compliance with the emission limits in Table 1 by one of the following:

(A) Test each unit separately and demonstrate each unit's compliance with the applicable limit; or

(B) Test only after the last unit in the series and at the end of a common exhaust for multiple units, when all units are operating, and demonstrate that the series of units meet either:

(i) The lowest emission limit in Table 1 applicable to any of the units in series; or

(ii) A heat input weighted average of all the applicable emission limits in Table 1 using the following calculation.

$$\textbf{Weighted Limit} = \frac{\sum_{1}^{N} [\,(EL_X)*(Q_X)\,]}{\sum_{1}^{N} [\,Q_X\,]}$$

Where:

N = total number of units or processes

X = each individual unit or process

EL_X = emission limit for unit or process X

Q_X = heat input for unit or process X during test

(e) Certification

(1) Unit Certification

For units that do not allow adjustment of the fuel and combustion air for the combustion system by the owner or operator, any manufacturer or distributor that distributes for sale or sells units or combustion systems for use in the SCAQMD may elect to apply to the Executive Officer to certify such units or combustion systems as compliant with subdivision (c).

(2) Confirmation of Emissions

Any manufacturer's or distributor's application to the Executive Officer to certify a model of unit or combustion system as compliant with the emission limit and demonstration requirement of subdivision (c) shall obtain confirmation from an independent contractor that is approved by the Executive Officer under the Laboratory Approval Program for the necessary test methods prior to applying for certification that each unit

model complies with the applicable requirements of subdivision (c). This confirmation shall be based upon SCAQMD approved emission tests. A SCAQMD approved protocol shall be adhered to during the confirmation testing of all units and combustion systems subject to this rule. Emission testing shall comply with the requirements of paragraphs (d)(1) through (d)(6) except that emission testing shall be conducted at greater than 90% rated heat input capacity and additional emission testing shall be conducted at a heat input of less than 35% of the rated heat input capacity.

(3) When applying for unit(s) or combustion system(s) certification, the manufacturer or distributor shall submit to the Executive Officer the following:

(A) A statement that the model of unit or combustion system is in compliance with subdivision (c). The statement shall be signed and dated by the manufacturer's or distributor's responsible official and shall attest to the accuracy of all statements;

(B) General Information

(i) Name and address of manufacturer or distributor;

(ii) Brand name, if applicable;

(iii) Model number(s), as it appears on the unit or combustion system rating plate(s);

(iv) List of all combustion system components; and

(v) Rated Heat Input Capacity, gross output of burner(s), and number of burners;

(C) A description of each model of unit or combustion system being certified; and

(D) A source test report verifying compliance with the applicable emission limit in subdivision (c) for each model to be certified. The source test report shall be prepared by the confirming independent contractor and shall contain all of the elements identified in the SCAQMD approved Protocol for each unit tested.

(4) When applying for unit or combustion system certification, the manufacturer or distributor shall submit the information identified in paragraph (e)(3) no more than ninety (90) days after the date of the source test identified in subparagraph (e)(3)(D) and at least 120 days prior to the date of the proposed sale and installation of any SCAQMD certified unit or combustion system.

(5) The Executive Officer shall certify a unit or combustion system model or models which complies with the provisions of subdivision (c) and of paragraphs (e)(2), (e)(3), and (e)(4).

(6) Certification status shall be valid for seven years from the date of approval by the Executive Officer. After the seventh year, recertification shall be required by the Executive Officer according to the requirements of paragraphs (e)(2), (e)(3), and (e)(4).

(f) Enforcement

(1) The Executive Officer may inspect certification records and unit installation, operation, maintenance, repair, combustion system modification, and test records of owners, operators, manufacturers, distributors, retailers, and installers of units located in the SCAQMD, and conduct such tests as are deemed necessary to ensure compliance with this rule. Tests shall include compliance determinations, as specified in paragraphs (d)(1) through (d)(4), (d)(6), and (d)(7).

(2) A compliance determination specified under paragraph (f)(1) that finds emissions in excess of those allowed by this rule shall constitute a violation of this rule.

(g) Exemptions

(1) The provisions of this rule shall not apply to:

(A) Boilers, water heaters, thermal fluid heaters, or process heaters subject to SCAQMD Rules 1146, 1146.1, or 1146.2, including but not limited to those that provide heat to a unit through a heat exchange system;

(B) Units subject to registration pursuant to SCAQMD Rule 222;

(C) Units regulated under Regulation XX;

(D) Solid fuel-fired combustion equipment;

(E) Charbroilers;

(F) Fryers, including fryers used for nut, seed, or other food product oil roasting; and

(G) Emission control equipment including but not limited to afterburners.

(2) The provisions of paragraphs (c)(1) and (c)(3) of this rule shall not apply to units with daily NOx emissions of 1 pound per day or less as documented by:

(A) A rated heat input capacity of less than 325,000 BTU per hour;

(B) Compliance with a permit condition that limits NOx emissions to 1 pound per day or less;

(C) Daily recordkeeping of unit operation, an installed unit specific non-resettable time meter, and the following specified rated heat input capacities operating the specified number of hours every day:

(i) Less than or equal to 400,000 BTU per hour and operating less than or equal to 16 hours per day; or

(ii) Less than or equal to 800,000 BTU per hour and operating less than or equal to 8 hours per day; or

(iii) Less than or equal to 1,200,000 BTU per hour and operating less than or equal to 5 hours per day.

(D) Daily recordkeeping of unit use, including but not limited to time records of unit operation using a unit-specific non-resettable time meter, daily fuel consumption documented using an non-resettable fuel meter, or daily process rate; or

(E) Daily use of natural gas less than or equal to 7,692 cubic feet per day at standard temperature and pressure, documented by daily recordkeeping of fuel gas consumption with a non-resettable fuel meter and a test protocol, calculations, and results of a test of the gas pressure to the meter conducted by the local utility or an independent contractor. The documentation of gas pressure to the meter shall include a letter stating that the test was performed using the included protocol and the letter shall be signed by the person performing the test.

(3) The provisions of paragraph (c)(3) of this rule shall not apply to units heated solely with infrared burners.

(h) Mitigation Fee Compliance Option

(1) An owner or operator of a unit may elect to delay the applicable compliance date in Table 2 three years by submitting an alternate compliance plan and paying an emissions mitigation fee to the SCAQMD in lieu of meeting the applicable NOx emission limit in Table 1.

(2) Compliance Demonstration

An owner or operator of a unit electing to comply with the mitigation fee compliance option shall:

(A) Submit an alternate compliance plan and pay the mitigation fee to the Executive Officer at least 150 days prior to the applicable compliance date in Table 2; and

(B) Maintain on-site verification of mitigation fee payment and SCAQMD approval of the alternate compliance plan that shall be made available upon request to SCAQMD staff.

(3) Plan Submittal

The alternate compliance plan submitted pursuant to paragraphs (h)(1) and (h)(2) shall include:

(A) A cover letter submitted to the SCAQMD identifying that the application is for a Rule 1153.1 (h) Mitigation Fee Compliance Plan, listing the applicable unit(s), and signed by the responsible official;

(B) A completed SCAQMD Form 400A with company name, SCAQMD Facility ID, identification that the application is for a compliance plan (section 7 of form), identification that the request is for a Rule 1153.1 (h) Mitigation Fee Compliance Plan (section 9 of the form), and signature of the responsible official;

(C) Attached documentation of unit fuel use for previous 3 years, description of weekly operating schedule, unit permit ID, unit heat rating (BTU/hour), and fee calculation;

(D) Filing fee payment; and

(E) Mitigation fee payment as calculated by Equation 1.

Equation 1:

$$MF = R * (3 \text{ years}) * (L_1 - L_0) * (AF) * (k)$$

Where,

MF = Mitigation fee, $

R = Fee Rate = $12.50 per pound ($6.25 per pound for a small business with 10 or fewer employees and gross annual receipts of $500,000 or less)

L_1 = Default NOx emission factor: 0.136 lbs of NOx/mmBTU for gaseous fuels and 0.160 lb/mmBTU for fuel oils

L_0 = Applicable NOx emission limit specified in Table 1 in lbs/mmBTU

AF = Annual average fuel usage of unit for previous 5 years, mmscf/yr for natural gas or gallons for liquid fuel

k = unit conversion for cubic feet of natural gas to BTU = 1,050 BTU/scf; 95,500 BTU/gallon for LPG; and 138,700 BTU/gallon for fuel oil

(4) Rule 1147 Mitigation Fee Plan Submittal

A mitigation fee compliance plan submitted pursuant to SCAQMD Rule 1147 may be used to comply with the requirements of this paragraph so long as the owner/operator of the unit notifies the Executive Officer at least 150 days prior to the applicable compliance date specified in Table 2.

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

(Adopted January 4, 1991)(Amended January 13, 1995)

RULE 1153. COMMERCIAL BAKERY OVENS

(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

Yt*	Pounds VOC/ton Bakery Product	Yt*	Pounds VOC/ton Bakery Product
1.0	0.8488	16.0	7.5176
1.5	1.0711	16.5	7.7399
2.0	1.2934	17.0	7.9622
2.5	1.5157	17.5	8.1845
3.0	1.7380	18.0	8.4068
3.5	1.9603	18.5	8.6291
4.0	2.1826	19.0	8.8514
4.5	2.4049	19.5	9.0737
5.0	2.6272	20.0	9.2959
5.5	2.8495	20.5	9.5182
6.0	3.0718	21.0	9.7405
6.5	3.2941	21.5	9.9628
7.0	3.5163	22.0	10.1851
7.5	3.7386	22.5	10.4074
8.0	3.9609	23.0	10.6297
8.5	4.1832	23.5	10.8520
9.0	4.4055	24.0	11.0743
9.5	4.6278	24.5	11.2966
10.0	4.8501	25.0	11.5189
10.5	5.0724	25.5	11.7412

11.0	5.2947	26.0	11.9635
11.5	5.5170	26.5	12.1857
12.0	5.7393	27.0	12.4080
12.5	5.9616	27.5	12.6303
13.0	6.1839	28.0	12.8526
13.5	6.4061	28.5	13.0749
14.0	6.6284	29.0	13.2972
14.5	6.8507	29.5	13.5195
15.0	7.0730	30.0	13.7418
15.5	7.2953		

* Yt = (yeast percentage) x (fermentation time)
If yeast is added in 2 steps, Yt = (initial yeast percentage) (total fermentation time) + (remaining Yeast percentage) (remaining fermentation time)

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

(Adopted December 4, 2009)(Amended May 2, 2014)

RULE 1155. PARTICULATE MATTER (PM) CONTROL DEVICES

(a) Purpose

The purpose of this rule is to establish requirements for permitted particulate matter (PM) air pollution control devices, including, but not limited to, baghouses, high efficiency particulate air (HEPA) systems, bin vents, or other dust collectors using high efficiency or other air filters, cyclones, electrostatic precipitators, and wet scrubbers.

(b) Applicability

This rule applies to the operator of permitted PM air pollution control device(s) venting processes that have direct (non-combustion) PM emissions. A summary of key rule elements is provided in Table 1 of this rule.

(c) Definitions

(1) BEST AVAILABLE CONTROL TECHNOLOGY (BACT) is as defined in South Coast Air Quality Management District (SCAQMD) Rule 1302 – Definitions, subdivision (h).

(2) BAGHOUSE means an air pollution control device designed to remove PM from a gas stream using fabric filters in the shape of a tube or an envelope, or other air filters that are built into a frame or cartridge. For the purpose of this rule, baghouses are separated into three tiers based on the following characteristics:

(A) Tier 1: Baghouses for which the filter surface area is less than or equal to 500 square feet;

(B) Tier 2: Baghouses for which the filter surface area is greater than 500 square feet but less than or equal to 7,500 square feet; or

(C) Tier 3: Baghouses for which the filter surface area is greater than 7,500 square feet.

(3) BAG LEAK DETECTION SYSTEM (BLDS) means a system that monitors electrical charge transfer based on triboelectricity or electrostatic induction to continuously monitor bag leakage and similar failures by detecting changes in particle mass loading in the exhaust.

(4) BIN VENT means an air filtration dust collector designed to remove PM from the air that is displaced by materials filling silos and bins.

(5) CONTINUOUS OPACITY MONITORING SYSTEM (COMS) means a system that meets minimum requirements specified under U.S. EPA 40 CFR Part 60, Appendix B, to continuously monitor opacity.

(6) CYCLONE means an air pollution control device designed to remove PM from a gas stream by inertia.

(7) ELECTROSTATIC PRECIPITATOR (ESP) means an air pollution control device designed to remove PM from a gas stream by imparting a high voltage direct current (DC) charge to the particles while simultaneously ionizing the carrier gas, producing an electric corona.

(8) EXISTING PM CONTROL DEVICE means a PM air pollution control device installed or for which an application for a permit has been deemed complete on or before December 4, 2009.

(9) FACILITY means any source or group of sources or other air contaminant-emitting activities which are subject to this rule and are located on one or more contiguous properties within the SCAQMD, 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.

(10) NEW PM CONTROL DEVICE means a PM air pollution control device for which an application for a permit has been deemed complete after December 4, 2009.

(11) NON-CONTINUOUS PROCESS means an emissions generating activity vented to a PM air pollution control device that operates no more than once per week or for periods of less than one hour, not to cumulatively exceed 4 hours during any single day.

(12) VERIFIED FILTRATION PRODUCT means a filtration product that has been verified under the U.S. EPA Environmental Technology Verification (ETV) program at the time of purchase. Manufacturers whose filtration

product verification has expired must demonstrate at the time of purchase that the product is the same as was previously tested and verified under the ETV program.

(13) WET SCRUBBER means an air pollution control device designed to remove PM from a gas stream by using a finely atomized stream of liquid to capture particulate matter pollutants.

(d) General Requirements

(1) Beginning April 1, 2010, the operator of a facility shall not cause or allow any visible emissions (excluding condensed water vapor) from any PM air pollution control device required to have a permit.

(2) No later than January 1, 2011, the operator of any Tier 3 baghouse shall meet an outlet PM concentration of less than or equal to 0.01 grains per dry standard cubic foot (gr/dscf).

(A) Notwithstanding the above, the operator of hot mix asphalt production equipment shall comply with the 0.01 gr/dscf limit no later than January 1, 2013, unless the operator has documentation that demonstrates that new fabric filters have been installed within 12 months prior to December 4, 2009, in which case the hot mix asphalt production equipment shall comply by January 1, 2014 or at the end of the filter useful life, whichever occurs sooner.

(3) No later than April 1, 2010, all permitted PM control devices shall be operated and maintained in accordance with the manufacturer's operation and maintenance manual or other similar written materials supplied by the manufacturer or distributor of a control device to ensure that the control device remains in proper operating condition. If such documents are not available, the operator shall provide and follow written operation and maintenance procedures for the PM control device(s). Such documentation shall be made available to the Executive Officer immediately upon request.

(4) No later than January 1, 2012 or after the end of the useful life of a manual shaker unit, whichever occurs sooner, the operator of an existing manual shaker baghouse shall upgrade or replace it with, at a minimum, an automated shaker unit.

(5) An operator shall not install a manual shaker baghouse after December 4, 2009.

(6) If the PM emission limit in paragraph (d)(2) is exceeded, the operator shall file a permit application to use verified filtration products, as defined in paragraph (c)(12), or other technologies or methods demonstrated through source test pursuant to paragraph (e)(6) to comply with the requirement in paragraph (d)(2), within three months of discovery by the operator or of notification by the Executive Officer, to replace the existing filter bags or cartridges. The operator shall install the verified filtration products within three months of issuance of the permit.

(7) If the operator discovers the exceedance of the PM limit in paragraph (d)(2) and resolves the problem that led to the exceedance, within 24 hours of discovery, the operator would not be subject to the requirements in paragraph (d)(6).

(8) When a new process is vented to a new baghouse, the operator shall install and maintain a ventilation system that meets a minimum capture velocity requirement specified in the applicable standards of the most current Edition of the U.S. Industrial Ventilation Handbook, American Conference of Governmental Industrial Hygienists, at the time of installation.

(9) The operator shall discharge material collected in a permitted PM control device for disposal or bring the material back to the process through a controlled material transfer system to prevent fugitive emissions during material transfer, including, but not limited to, shrouding or use of dust suppressants to stabilize the material.

(10) Until more stringent requirements of this rule are effective and after, if still applicable, the operator shall operate and maintain all existing PM air pollution control devices according to existing SCAQMD permit conditions.

(11) For any new or modified PM air pollution control device subject to BACT, the operator of such device shall meet the more stringent BACT level established for that device (pursuant to SCAQMD BACT Guidelines) at the time of evaluation of the permit application for the device.

(e) Monitoring Requirements

(1) No later than March 31, 2010, the operator shall have a minimum of one person trained in the reading of visible emissions pursuant to EPA Method

22. Beginning April 1, 2010, the operator of any baghouse or other PM control device shall have the trained person conduct a continuous five-minute visible emissions observation using EPA Method 22 once a week and shall maintain records for each observation and any necessary subsequent action(s) taken to eliminate visible emissions pursuant to subdivision (f). The provisions of this paragraph shall apply to Tier 3 baghouse units up to and until compliance with the provisions of paragraph (e)(3).

(A) If the operator observes any visible emissions exiting at any time, including during a scheduled Method 22 test, the operator shall implement, within 24 hours, all necessary corrective actions to eliminate the visible emissions.

(B) To verify corrective actions were effective, the operator must restart the operations and complete a new Method 22 test to ensure no visible emissions are present. If visible emissions are still present, further corrective actions pursuant to subparagraph (e)(1)(C) must be taken. If no visible emissions are present, normal operations may resume.

(C) If the operator, after taking all corrective actions, subsequently observes visible emissions, the operator shall shut down the PM emitting equipment that vents into the control device, unless the baghouse operation can be adjusted to ensure no visible emissions, until necessary steps are taken to prevent the visible emissions. Baghouse adjustments include, but are not limited to, closing off specific baghouse chambers.

(D) If the activity being observed is consistently a duration of less than five minutes, then the Method 22 observation shall be for the period in which the activity takes place.

(E) An operator shall not be considered in violation of this paragraph and (d)(1), if the operator complies with subparagraphs (e)(1)(A) through (e)(1)(D).

(F) To the extent that multiple Method 22 tests can be conducted simultaneously, the operator may observe multiple sources contemporaneously at a single time as long as all of the sources are located in the field of view of the observer and appropriate records are kept for each observation. If the operator observes a visible

emissions problem during the reading, each source shall then be monitored separately.

(2) Notwithstanding the requirements of paragraph (e)(1), any baghouse outfitted completely with verified filtration products shall only be required to conduct visible emission observations once per month, pursuant to paragraph (e)(1), and shall maintain records for each Method 22 observation and any subsequent actions taken to eliminate visible emissions.

(3) The operator of any Tier 3 baghouse shall install, operate, calibrate and maintain a BLDS pursuant to the manufacturer's written recommendations, to monitor baghouse performance and ensure compliance with in paragraphs (d)(1) and (d)(2).

(A) The provisions of this paragraph shall apply to any new Tier 3 baghouse installed and operated as of December 4, 2009. For an existing baghouse, the facility operator shall file a permit application for a BLDS no later than May 1, 2010 and shall install the BLDS within three months of issuance of the permit.

(B) The BLDS system shall meet the following minimum requirements:

(i) The BLDS sensor must provide output of relative PM emissions; and

(ii) The BLDS must have an alarm that will activate automatically when it detects significant increase in relative PM emissions greater than a preset level and the presence of an alarm condition should be clearly apparent to the facility operator.

(C) The operator shall install a BLDS that has been certified by the manufacturer to be capable of alarming automatically before visible emissions can be seen in the exhaust of a baghouse and shall set the BLDS to operate at such level. The baseline output for the system must be established as follows:

(i) Adjust and maintain the range and the averaging period of the device for the specific application per the manufacturer's written specifications and recommendations; and

(ii) Establish and maintain the alarm set points and the alarm delay time per the manufacturer's written specifications and recommendations.

(D) The operator shall perform adequate maintenance and inspections of a BLDS, according to the written specifications and recommendations of the manufacturer, to ensure that the monitor is operating properly at all times and shall maintain the records pursuant to subdivision (f).

(E) If the operator receives an alarm from the BLDS, the operator shall investigate the baghouse and the BLDS, and take all necessary corrective actions to eliminate the cause of the alarm.

(F) The operator shall maintain filters and operate the baghouse such that the BLDS alarm activation is minimized and the cumulative number of hours of alarm activation within any continuous six-month rolling period do not exceed more than five percent of the total operating hours in that period after following the procedures of subparagraph (e)(3)(G), including, but not limted to, shut down of the equipment as specified.

(G) Each time the alarm activates, the operator shall count the alarm time as the actual length of time of the elevated emissions that caused the alarm and record it. If the inspection of the baghouse, pursuant to subparagraph (e)(3)(E), demonstrates that no visible emissions are occuring in conjunction with the alarm and that no corrective actions are necessary to the baghouse equipment, no alarm time will be counted. If cumulative alarm time exceeds five percent of the total operating hours based on any continuous six-month rolling period, the operator shall shut down the equipment that vents into the baghouse until necessary actions are taken to eliminate the elevated emissions.

(4) Notwithstanding the provisions of paragraph (e)(1) and subparagraph (e)(3)(A) applicable to Tier 3 units, the operator of hot mix asphalt production equipment may conduct daily visible emissions monitoring, as described in paragraph (e)(1), in lieu of BLDS installation, provided the facility operator notifies the Executive Officer in writing no later than May 1, 2010, files a permit application for a BLDS no later than June 1, 2011, and installs the BLDS within three months of issuance of the permit,

at which time the operator shall comply with the provisions of paragraph (e)(3). Daily visible emissions monitoring shall begin no later than January 1, 2011 and continue until such time the BLDS is installed. The operator shall maintain records for each observation and any subsequent actions taken to eliminate visible emissions during the time in which daily visible emissions monitoring is conducted.

(5) No later than January 1, 2015 or after the end of the useful life of a COMS, whichever occurs sooner, a COMS installed at an existing Tier 3 baghouse shall be changed to a BLDS.

(6) Source tests conducted to demonstrate compliance with paragraph (d)(2) shall follow SCAQMD Methods 5.1, 5.2, or 5.3, as applicable.

(A) For a baghouse located at a Title V facility, the facility operator shall conduct an initial source test no later than January 1, 2011 to demonstrate compliance with the requirements of paragraph (d)(2). Subsequent source tests shall be conducted every five years thereafter.

(B) Source tests shall be conducted by an approved lab from the SCAQMD Laboratory Approval Program. For the purpose of this rule, the total weight of PM in solid and liquid form should be considered when conducting source tests.

(f) Recordkeeping

Records shall be kept in a format approved by the Executive Officer to demonstrate compliance with the provisions of this rule, and all records and information recorded pursuant to this subdivision shall be maintained at the facility for a minimum of five years and shall be made available to the Executive Officer immediately upon request.

(1) For the purposes of paragraph (e)(1), records kept shall include, but not be limited to:

(A) Facility name;

(B) Observer's name and affiliation;

(C) Date and time of observation;

(D) Process unit(s) being observed;

(E) Observer's position relative to the source;

(F) Observation duration;

(G) Whether visible emissions occurred and cumulative amount of time visible emissions occurred; and

(H) If visible emissions were observed, what actions were taken to correct the problem causing them, including and up to date and time of equipment shutdown, if applicable.

(2) For the purposes of paragraph (e)(3), records kept shall include, but not be limited to:

(A) Facility name;

(B) Facility representative for maintaining the BLDS;

(C) Date and time of routine maintenance and inspections conducted on BLDS;

(D) The date and time of any alarm, including length of the alarm time, and cause of the alarm;

(E) The date and time corrective action is completed to eliminate the cause of the alarm;

(F) Whether visible emissions occurred; and

(G) Total operating hours of the baghouse.

(g) Exemptions

(1) With the exception of paragraph (d)(1), any baghouse for which the filter surface area is less than or equal to 100 square feet is exempt from the provisions of this rule.

(2) The operator of a PM air pollution control device venting a non-continuous process is exempt from the provisions of paragraph (e)(1), provided no visible emissions occur when the process activity takes place.

(3) Any equipment with an active permit to operate that is not in operation as of December 4, 2009 shall be exempt from the provisions of this rule until operations commence.

(4) Facility operations that are subject to District Rules 1105.1 – Reduction of PM_{10} and Ammonia Emissions from Fluid Catalytic Cracking Units, and 1156 – Further Reductions of Particulate Emissions from Cement Manufacturing Facilities, are exempt from the provisions of this rule.

(5) The operator of a Tier 1 or Tier 2 baghouse that voluntarily installs, operates, calibrates and maintains a BLDS pursuant to paragraph (e)(3) shall be exempt from the visible emissions provisions of paragraph (e)(1).

(6) Bin vents are exempt from the provisions of paragraph (e)(1).

(7) The provisions of paragraphs (d)(1), (d)(2), (d)(6), and (e)(1), and subparagraphs (e)(3)(E) through (e)(3)(G) shall not apply during the one-half hour of start-up of the equipment or process venting to the PM air pollution control device, including start-up after a repair to fix an equipment breakdown or after a scheduled maintenance activity. During that one-half hour starting period, PM air pollution control devices under this rule remain subject to the PM concentration (grain loading) requirements of Rule 404 and an opacity requirement of no greater than No. 1 on the Ringelmann Chart as specified in Rule 401 (b)(1) [shown as Rule 401 (a) in the SIP-approved version, as amended March 2, 1984, and SIP-approved on January 29, 1985].

(8) For PM air pollution control devices connected in series, the provisions of paragraphs (d)(2), (d)(6), and (e)(1) shall only apply to the PM air pollution control device exhausting to the atmosphere. In the event a Tier 3 baghouse is not the last in the series to vent to the atmosphere, the provisions of paragraph (e)(3) shall not apply.

(9) Any paint spray booth or powder spray booth is exempt from the provisions of this rule.

(10) Air pollution control equipment exclusively venting organic gases from hot mix asphalt load-out operations and directly related equipment, including storage silos, conveyors, mills, and batching towers, are exempt from the provisions of this rule.

(11) With the exception of paragraph (d)(1), any portable dust collector, fume extractor, or negative air machine with a maximum rated capacity of less than or equal to 3,000 cfm is exempt from the provisions of this rule.

(12) With the exception of paragraph (d)(1), facility operations that are subject to District Rule 1469 - Hexavalent Chromium Emissions from Chromium Electroplating and Chromic Acid Anodizing Operations are exempt from the provisions of this rule.

(13) With the exception of paragraph (d)(1), high efficiency particulate air (HEPA) equipment are exempt from the provisions of this rule.

Table 1
Summary of Requirements

Fabric Filtration PM Air Pollution Control Equipment (baghouses)*			Other Fabric and Non-Fabric Filtration PM Air Pollution Control Equipment (dust collectors, cyclones, ESPs, wet scrubbers)*
Tier 1	Tier 2	Tier 3	n/a
≤ 500 square feet	> 500 – 7,500 square feet	> 7,500 square feet	n/a
Once-a-week visible emissions monitoring and recordkeeping (new, existing)	Once-a-week visible emissions monitoring and recordkeeping (new, existing)	Until BLDS is installed, once-a-week visible emissions monitoring and recordkeeping	Once-a-week visible emissions monitoring and recordkeeping (new, existing)
--	--	BLDS installation (new, existing)	--
--		Emission limit (0.01 gr/dscf)	--
		Title V facilities conduct initial source test and test every five years relative to compliance with the emission limit.	

* Except as provided in subdivision (g) Exemptions.

(Adopted November 4, 2005)(Amended March 6, 2009)

RULE 1156. FURTHER REDUCTIONS OF PARTICULATE EMISSIONS FROM CEMENT MANUFACTURING FACILITIES

(a) Purpose

The purpose of this rule is to further reduce particulate matter (PM) emissions from cement manufacturing facilities.

(b) Applicability

This rule applies to all operations, materials handling, and transport at a cement manufacturing facility, including, but not limited to, kiln and clinker cooler, material storage, crushing, drying, screening, milling, conveying, bulk loading and unloading systems, internal roadways, material transport, and track-out.

(c) Definitions

(1) BAG LEAK DETECTION SYSTEM (BLDS) means a system that meets the minimum requirements specified under U.S. EPA 40 CFR Part 63, Subpart LLL, Section 1350 (m) to continuously monitor bag leakage and failure.

(2) CEMENT MANUFACTURING FACILITY means any facility that engages in, or has been engaged in prior to November 4, 2005, producing portland cement or associated products, as defined in the Standard Industrial Classification Manual as Industry No. 3241, Portland Cement Manufacturing.

(3) CHEMICAL DUST SUPPRESSANT means any non-toxic chemical stabilizer which is used as a treatment material to reduce fugitive dust emissions and its use is not prohibited by any other applicable law and meets all applicable specifications required by any federal, state, or local water agency.

(4) CLINKER means a product from the kiln which is used as a feedstock to make cement.

(5) CLINKER COOLER means equipment into which clinker product leaving the kiln is placed to be cooled by air supplied by a forced draft or natural draft supply system.

(6) CONVEYING SYSTEM means a device for transporting materials from one piece of equipment or location to another piece of equipment or location within a facility. Conveying systems include, but are not limited to, the following: feeders, belt conveyors, bucket elevators and pneumatic systems.

(7) CONTINUOUS OPACITY MONITORING SYSTEM (COMS) means a system that meets minimum requirements specified under U.S. EPA 40 CFR Part 60, Appendix B, to continuously monitor opacity.

(8) CONVEYING SYSTEM TRANSFER POINT means a point where any material including, but not limited to, feed material, fuel, clinker or product, is transferred to or from a conveying system, or between separate parts of a conveying system.

(9) COVERED CONVEYOR is a conveyor where the top and side portion of the conveyor are covered by a removable cover to allow routine inspection and maintenance.

(10) DUST SUPPRESSANTS are water, hygroscopic materials, or chemical stabilizers used as a treatment material to reduce fugitive dust emissions.

(11) ENCLOSED CONVEYOR is any conveyor where the top, side and bottom portion of the conveyor system is enclosed except for points of loading and discharge and except for a removable cover to allow routine inspection and maintenance.

(12) ENCLOSED SCREENING EQUIPMENT means screening equipment where the top portion of the equipment is enclosed, except for the area where the materials are loaded to the screening equipment.

(13) ENCLOSED STORAGE PILE means any storage pile that is completely enclosed in a building or structure consisting of a solid roof and walls.

(14) END OF WORK DAY means the end of a working period that may include one or more work shifts, but no later than 8 p.m.

(15) EXISTING EQUIPMENT means any equipment, process or operation having an existing valid AQMD permit that was issued prior to November 4, 2005.

(16) FACILITY means any source or group of sources or other air contaminant-emitting activities which are subject to this rule and are located on one or more contiguous properties within the AQMD, 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.

(17) FINISH MILL means a roll crusher, ball and tube mill or other size reduction equipment used to grind clinker to a fine powder. Gypsum and other materials may be added to and blended with clinker in a finish mill. The finish mill also includes the air separator associated with the finish mill.

(18) HAUL TRUCK means a diesel heavy-duty truck that has a loading capacity equal to or greater than 50 tons.

(19) INACTIVE CLINKER PILE is a pile of clinker material that has not been disturbed, removed, and/or added to as a result of loading, unloading, and/or transferring activities for 30 (thirty) consecutive days.

(20) KILN means a device, including any associated preheater or precalciner devices that produce clinker by heating limestone and other materials for subsequent production of portland cement.

(21) OPEN STORAGE PILE is any accumulation of materials which attains a height of three (3) feet or more or a total surface area of one hundred fifty (150) square feet or more. The open pile is defined as inactive when loading and unloading has not occurred in the previous 30 consecutive days.

(22) OPERATOR means the operator of the cement manufacturing facility subject to this rule unless otherwise specified.

(23) PAVED ROAD means a road improved by covering with concrete, asphaltic concrete, recycled asphalt, or asphalt.

(24) RAW MILL means a ball, tube, or vertical roller mill or other size reduction equipment used to grind materials to the appropriate size. Moisture may be added or removed from the materials during the grinding operation. A raw mill may also include a raw material dryer and/or air separator.

(25) ROAD means any route with evidence of repeated prior travel by vehicles.

(26) STABILIZED SURFACE means any previously disturbed surface area or open storage pile which, through the application of dust suppressants, shows visual or other evidence of surface crusting, is resistant to being the source of wind-driven fugitive dust, and is demonstrated to be stabilized by the applicable test methods contained in the Rule 403 Implementation Handbook.

(27) STREET SWEEPER is a PM_{10} efficient street sweeper approved pursuant to Rule 1186 – PM_{10} Emissions from Paved and Unpaved Roads & Livestock Operations.

(28) TOP PROCESS PARTICULATE EMITTERS means:

(A) process equipment, including but not limited to the kiln, clinker cooler, raw mill, and finish mill, vented to air pollution control equipment, except open-top baghouses, that account for 60% of the total process particulate

emissions at the facility, for the requirement of using BLDS or COMS under paragraph (e)(2); or

(B) process equipment, including but not limited to the kiln, clinker cooler, raw mill, and finish mill, vented to air pollution control equipment, that account for 80% of the total process particulate emissions at the facility for the monitoring, source testing and recordkeeping requirements under paragraph (e)(3), (e)(8) and subparagraph (f)(2)(D).

(29) TRACK-OUT means any material that adheres to and agglomerates on the exterior surface of motor vehicles, haul trucks, and equipment (including tires) that has been released onto a paved road and can be removed by a vacuum sweeper or a broom sweeper under normal operating conditions.

(30) VERIFIED FILTRATION PRODUCT means filtration products that are verified under the U.S. EPA Environmental Technology Verification program (ETV).

(31) WET SUPPRESSION SYSTEM means a system that supplies ultra-fine droplets of water or chemical dust suppressant by atomization through means of using compressed air or applying high pressure as specified by manufacturers to minimize dust.

(32) WIND-DRIVEN FUGITIVE DUST means particulate matter emissions from any disturbed surface area which is generated by wind action alone.

(33) WIND FENCE means a system consisting of a stand alone structure supporting a wind fence fabric. The wind fence fabric shall have maximum porosity of 20%.

(d) Requirements

The operator shall comply with the following requirements unless otherwise stated.

(1) Visible Emissions

(A) The operator of a facility shall not cause or allow the discharge into the atmosphere of visible emissions exceeding 10 percent opacity based on an average of 12 consecutive readings from any operation at the facility, except open piles, roadways and unpaved areas, using EPA Opacity Test Method 9.

(B) For open piles, roadways and other unpaved areas, the operator of a facility shall not cause or allow the discharge into the atmosphere of visible emissions exceeding 20 percent opacity based on an average of 12 consecutive readings; or 50 percent opacity based on 5 individual consecutive readings using SCAQMD Opacity Test Method 9B.

(C) The operator of a facility shall not cause or allow any visible dust plume from exceeding 100 feet in any direction from any operations at the facility.

(2) Loading, Unloading, and Transferring

(A) The operator shall conduct material loading and unloading to and from trucks, railcars, or other modes of material transportation through an enclosed system that is vented to SCAQMD permitted air pollution control equipment that meets the requirements in paragraph (d)(6) and subparagraph (d)(1)(A) and is operated during loading and unloading activities. In the event the system consists of a building, the enclosed building shall have openings with overlapping flaps, sliding doors or other equally effective devices, as approved by the Executive Officer to meet the requirement in subparagraph (d)(1)(A), which shall remain closed, except to allow trucks and railcars to enter and leave.

(B) The operator shall cover or enclose all conveying systems and enclose all transfer points. During all conveying activities, the enclosed transfer points and enclosed conveying systems shall be vented to a permitted air pollution control device that meets the requirements in subparagraph (d)(1)(A) and paragraph (d)(6) and is operated during all conveying activities. The enclosure shall have access doors to allow routine inspection and maintenance.

(C) The operator shall apply dust suppressants as necessary during material loading, unloading, and transferring activities, and at conveying system transfer points to dampen and stabilize the materials transported and prevent visible dust emissions generated to meet the requirement in subparagraph (d)(1)(A).

(D) The operator shall install and maintain as necessary dust curtains, shrouds, belt scrapers, and gaskets along the belt conveying system to contain dust, prevent spillage and carryback in order to minimize visible emissions.

(E) The operator shall use appropriate equipment including, but not limited to, stackers or chutes, as necessary, to minimize the height from which materials fall into storage bins, silos, hoppers or open stock piles and reduce the amount of dust generated to meet the requirements in paragraphs (d)(1) and (d)(6).

(3) Crushing, Screening, Milling, Grinding, Blending, Drying, Heating, Mixing, Sacking, Palletizing, Packaging, and Other Related Operations

(A) The operator shall enclose crushing, screening, milling, grinding, blending, drying, heating, mixing, sacking, palletizing, packaging and other related operations. The enclosed system shall be vented to permitted control equipment that meets the requirements in paragraph (d)(6) and subparagraph (d)(1)(A). The control equipment shall be operated during these operations.

(B) In lieu of the configuration described in subparagraph (d)(3)(A), the operator of a primary crusher installed and operated prior to November 4, 2005 may use wind fences on at least two sides of the primary crusher with one side facing the prevailing winds. The structure shall be equipped and operated with a wet suppression system. To implement this, the operator shall submit a permit modification application by May 4, 2006 for a primary crusher to enable the Executive Officer to develop permit conditions to ensure that this air pollution control system is designed and operated to minimize particulate emissions.

(C) The operator shall apply dust suppressants, as necessary, during all operations to dampen and stabilize the materials processed and prevent visible emissions generated to meet the requirements in subparagraph (d)(1)(A).

(4) Kilns and Clinker Coolers

The operator shall not operate the kilns and clinker coolers unless the kilns and clinker coolers are vented to air pollution control equipment that meets the requirements in paragraph (d)(6) and subparagraph (d)(1)(A).

(5) Material Storage

(A) An operator that stores raw materials and products in a silo, bin or hopper shall vent the silo, bin or hopper to an air pollution control device that meets the requirements in subparagraph (d)(1)(A) and paragraph (d)(6).

(B) No later than September 8, 2009, the operator shall conduct all clinker material storage and handling in an enclosed storage area that meets the requirements in subparagraph (d)(1)(A) and paragraph (d)(6). The enclosed storage area shall have opening(s) covered with overlapping flaps, and sliding door(s) or other equivalent device(s) approved by the Executive Officer, which shall remain closed at all times, except to allow vehicles to enter or exit. Prior to the completion and operation of the

enclosure, all clinker materials shall be stored and handled in the same manner as non-clinker materials as set forth in subparagraph (d)(5)(D).

(C) If clinker material storage and handling activities occur more than 1,000 feet from, and inside, the facility property-line, the operator may comply with all of the following in lieu of the requirements of subparagraph (d)(5)(B) no later than September 8, 2009:

(i) Utilize a three-sided barrier with roof, provided the open side is covered with a wind fence material of a maximum 20% porosity, allowing a removable opening for vehicle access. The removable wind fence for vehicle access may be removed only during minor or routine maintenance activities, the creation or reclamation of outside storage piles, the importation of clinker from outside the facility, and reclamation of plant clean-up materials. The removable opening shall be less than 50% of the total surface area of the wind fence and the amount of time shall be minimized to the extent feasible;

(ii) Storage and handling of material that is immediately adjacent to the three-sided barrier due to space limitations inside the structure shall be contained within an area next to the structure with a wind fence on at least two sides, with at least a 5 foot freeboard above the top of the storage pile to provide wind sheltering, and shall be completely covered with an impervious tarp, revealing only the active disturbed portion during material loading and unloading activities;

(iii) Storage and handling of other active clinker material shall be conducted within an area surrounded on three sides by a barrier or wind fences with one side of the wind fence facing the prevailing wind and at least a 5-foot freeboard above the top of the storage pile to provide wind sheltering. The clinker shall remain completely covered at all times with an impervious tarp, revealing only the active disturbed portion during material loading and unloading activities. The barrier or wind fence shall extend at least 20 feet beyond the active portion of the material at all times; and

(iv) Inactive clinker material may be alternatively stored using a continuous and impervious tarp, covered at all times, provided

records are kept demonstrating the inactive status of such stored material.

(D) For active open non-clinker material storage and handling, the operator shall comply with one of the following to meet the requirements of subparagraphs (d)(1)(B) and (d)(1)(C):

(i) Apply chemical dust suppressants to stabilize the entire surface area of the pile, except for areas of the pile that are actively disturbed during loading and unloading activities; or

(ii) Install and maintain a three-sided barrier or wind fences with one side facing the prevailing winds and with at least two feet of visible freeboard from the top of the storage pile to provide wind sheltering, maintain surface stabilization of the entire pile in a manner that meets the performance standards of subparagraphs (d)(1)(B) and (d)(1)(C), and store the materials completely inside the three-sided structure at all times; or

(iii) Install and maintain a three-sided barrier with roof, or wind fences with roof, to provide wind sheltering; maintain the open-side of the storage pile stabilized in a manner that meets the performance standards of subparagraphs (d)(1)(B) and (d)(1)(C), and store the materials completely inside the three-sided structure at all times; or

(iv) Install and maintain a tarp over the entire surface area of the storage pile, in a manner that meets the performance standards of subparagraphs (d)(1)(B) and (d)(1)(C), except for areas of the pile that are actively disturbed during loading and unloading activities. The tarp shall remain in place and provide cover at all times.

(E) All inactive non-clinker piles shall be stored and handled in the same manner as non-clinker materials, as set forth in subparagraph (d)(5)(D). The operator shall keep records demonstrating the inactive status of the non-clinker piles.

(F) For open storage piles subject to subparagraph (d)(5)(D), the operator shall apply chemical dust suppressants or dust suppressants during any material loading and unloading to/from the open piles; and re-apply chemical dust suppressants or dust suppressants to stabilize the disturbed surface areas of the open piles at the end of each work day in which loading and unloading activities were performed to meet the performance standards of subparagraphs (d)(1)(B) and (d)(1)(C) .

(6) Air Pollution Control Device

(A) The operator shall install and maintain an air pollution control system referred to in paragraphs (d)(2), (d)(3), (d)(4) and (d)(5) to meet the following performance standards measured with the approved source test in subdivision (g):

(i) an outlet concentration of 0.01 grain PM per dry standard cubic feet for equipment installed prior to November 4, 2005; and

(ii) a BACT outlet concentration not to exceed 0.005 grain PM per dry standard cubic feet for equipment installed on and after November 4, 2005.

(B) The operator shall install and maintain a baghouse ventilation and hood system that meets a minimum capture velocity requirement specified in the applicable standards of the U.S. Industrial Ventilation Handbook, American Conference of Governmental Industrial Hygienists, at the time of installation. If modification to the baghouse ventilation and hood system is required to meet the applicable standard, the operator shall be granted additional time up to December 31, 2006 to complete this process.

(C) The operator shall meet the requirements in paragraph (d)(6) by December 31, 2006 for pulse-jet baghouses, and by December 31, 2010 for non-pulse-jet baghouses.

(D) To show incremental progress towards the December 31, 2010 compliance date for non-pulse-jet baghouses, the operator shall submit to the Executive Officer a list of baghouse candidates for future modification or replacement by December 31, 2006. In addition, the operator shall submit a notification letter by December 31 of each year thereafter, starting in 2006, to demonstrate that the operator has completed at least 20% of the modification or replacement by 2006; 40% by 2007; 60% by 2008, 80% by 2009; and 100% by 2010.

(7) Internal Roadways and Areas

(A) Unpaved Roadways and Areas

(i) For haul roads used by haul trucks to carry materials from the quarry to different locations within the facility, the operator shall apply chemical dust suppressants in sufficient quantity and at least twice a year to stabilize the entire unpaved haul road surface; post signs at the two ends stating that haul trucks shall use these roads unless traveling to the maintenance areas; and enforce the speed

limit of 35 miles per hour or less to comply with the opacity limits in paragraph (d)(1).

(ii) For other unpaved roadways and areas, the operator shall apply chemical dust suppressants in sufficient quantity and at least twice a year to stabilize the surface, or apply gravel pad containing 1-inch or larger washed gravel to a depth of six inches; and enforce a speed limit of 15 miles per hour or less to comply with the opacity limits in paragraph (d)(1).

(B) Paved Roads

The operator shall sweep all internal paved roads at least once each regular work day or more frequently if necessary to comply with the opacity limits in paragraph (d)(1). Sweeping frequency may be reduced on weekends, holidays, or days of measurable precipitation provided that the operator complies with the opacity limits in paragraph (d)(1) at all times. Sweepers purchased or leased after November 4, 2005 shall be Rule 1186-certified sweepers.

(8) Track-Out

(A) The operator shall pave the closest 0.25 miles of internal roads leading to the public roadways and ensure that all trucks use these roads exclusively when leaving the facility to prevent track-out of dust to the public roadways and to comply with the opacity limits in paragraph (d)(1).

(B) If necessary to comply with the opacity limits in paragraph (d)(1), the operator shall install a rumble grate, truck washer, or wheel washer; and ensure that all trucks go through the rumble grate, truck washer or wheel washer such that the entire circumference of each wheel or truck is cleaned before leaving the facility.

(C) To prevent material spillage from trucks to public roadways and fugitive dust emissions during transport, a truck driver on the facility shall ensure that the cement truck hatches are closed and there is no track-out, and the operator shall provide truck cleaning facilities on-site.

(D) The operator shall provide, at least once each calendar year, the “Fugitive Dust Advisory” flyers prepared by the District to any company doing business with the facility and which is subject to the requirements in subparagraph (d)(8)(C).

(9) No Backsliding

To prevent any backsliding from the current level of control, the operator shall operate and maintain all existing equipment according to permit conditions stated in the permits approved by the Executive Officer prior to November 4, 2005 at all times.

(10) Compliance Monitoring Plan

(A) No later than June 8, 2009, the operator shall submit to the Executive Officer a complete compliance plan for wind monitoring and the monitoring, sampling, and analysis of hexavalent chromium, and pay a plan evaluation fee pursuant to Rule 306 – Plan Fees. The submitted plan will be disapproved if it does not meet the provisions of subparagraph (d)(10)(B). The operator shall resubmit an approvable plan within 30 days from date of disapproval; otherwise, the operator shall be deemed in violation of this provision.

(B) The monitoring plan submitted shall contain, at a minimum, the following:

(i) Siting and monitoring protocols that comply with EPA's and CARB's guidance and/or protocols for measurement of hexavalent chromium, wind direction, and wind speed. A minimum of three fence-line monitoring stations are required for hexavalent chromium: one upwind and one downwind of the facility under the common prevailing wind directions, and one subject to approval by the Executive Officer to ensure maximum effectiveness of the monitoring to the most potentially affected receptor, such as nearest residential or business receptors relative to clinker storage areas or potential hexavalent chromium emitting sources.

(ii) Breakdown provisions which include: (1) a statement that the operator will notify the Executive Officer in writing of the breakdown within 24 hours of its occurrence. If the breakdown occurs on a Friday, over a weekend, or on a national or state holiday observed by the facility, the facility shall report such breakdown on the following work day; (2) a repair schedule; and (3) an action plan with detailed measures to be taken by the operator to ensure that there will be at least 70% data capture at each site by each monitoring system;

(iii) Consent from the operator that allows the Executive Officer to conduct any co-located or audit sampling at any time;

(iv) Sampling analysis protocols that comply with EPA and CARB's appropriate guidance and/or protocols for hexavalent chromium. All samples shall be analyzed at a District-approved laboratory, which can be audited at any time; and

(v) Any other relevant data and information required by the Executive Officer.

(C) The Executive Officer shall approve or disapprove the complete plan within 60 days from the submittal date.

(D) The operator may file for a compliance monitoring plan amendment in the future relative to monitor siting or other elements of the plan as more site-specific data becomes available.

(11) Hexavalent Chrome Monitoring and Other Requirements

No later than six months from compliance plan approval or March 1, 2010, whichever occurs first, the operator of a cement manufacturing facility shall conduct hexavalent chromium ambient air monitoring as follows:

(A) The operator shall conduct ambient air monitoring for hexavalent chromium in accordance with the approved monitoring plan set forth in subparagraph (d)(10)(B) or (d)(10)(D), as applicable. The hexavalent chromium concentration from a 30-day rolling average at each monitoring station shall not exceed 0.70 nanograms per cubic meter (ng/m^3), excluding background. 24-hour sampling shall be conducted once every third day according to the EPA 1-in-3-day sampling calendar. For monitoring sample retrieval in which collection occurs on a weekend or facility observed national or state holiday, the sample may be collected the following business day.

(B) The operator may conduct 24-hour sampling once every six days for hexavalent chromium if there is no single exceedance of the 0.70 ng/m^3 level during 12 continuous months of monitoring. On this sampling schedule, the hexavalent chromium concentration from a 90-day rolling average at each monitoring station shall not exceed 0.70 ng/m^3, excluding background. If there is an exceedance while on this sampling schedule, sampling shall immediately revert back to once every three days. For monitoring sample retrieval in which collection occurs on a weekend or facility observed national or state holiday, the sample may be collected the following business day.

(C) For facilities that elect to comply with (d)(5)(C), any exceedance of the concentrations listed in clauses (d)(11)(A) or (d)(11)(B) will require

enclosure of all clinker materials storage and handling if the Executive Officer confirms, through wind event monitoring data, that the cement manufacturing facility is the source of violation. The facility operator may select one of the following enclosure schedule: 25% of the facility's five-year annual average clinker material stored and handled, by weight, no later than 12 months from the date of the exceedance; and an incremental 25% per subsequent year until completion; or complete the total enclosure within 24 months from the date of exceedance.

(12) Particulate Matter (PM10) Monitoring and Other Requirements

The operator of the cement manufacturing facility who accrues three or more approved notices of violation for an exceedance of the upwind/downwind level specified in Rule 403 within a 36-month period shall conduct PM10 ambient air monitoring. An amendment to the compliance monitoring plan to include PM10 monitoring protocols and procedures shall be filed within 90 days of the date of the third approved notice of violation. The monitoring equipment shall be installed and operated within 6 months from the date of modified plan approval and no later than one year from the date of the third approved notice of violation.

(A) The operator shall conduct continuous and real-time ambient air monitoring for PM10, using a continuous monitoring system, in accordance with a monitoring plan approved by the Executive Officer in a manner as set forth in subparagraphs (d)(10)(B) or (d)(10)(D), as applicable. The differences of PM10 concentrations from any two monitoring sites which represent upwind and downwind concentrations shall not exceed the amount and averaging time period specified in Rule 403.

(B) The operator shall apply dust suppressants on all openly stored non-clinker materials, unpaved roads, and unpaved areas within the facility, as well as take steps to decrease clinker dust, if the PM10 difference(s) set forth in Rule 403 are exceeded at any time.

(13) Wind Monitoring

(A) No later than September 8, 2009, the operator shall install and operate wind monitoring equipment to conduct hourly wind monitoring according to a protocol approved by the Executive Officer.

(B) On and after the date of operation of the wind monitoring equipment pursuant to subparagraph (d)(13)(A), the operator shall cease all open handling of clinker material for a two-hour period in the event that

instantaneous wind speeds exceed 25 miles per hour (mph), and if such wind speeds subsequently exceed 25 mph, a new two-hour period shall begin. During the aforementioned two-hour period, the facility would be exempt from the requirement of subparagraph (d)(1)(C) if the open handling of clinker material is ceased, provided that dust controls as required by District rules are applied; and unpaved roads are stabilized upon register of the high wind event via the wind monitoring equipment.

(e) Monitoring and Source Testing

(1) For the kilns and clinker coolers, the operator shall continuously monitor and record operating parameters including, but not limited to, flue gas flow rates and pressure drops across the baghouses to monitor baghouse performance and ensure compliance with the opacity limit in subparagraph (d)(1)(A).

(2) For all new baghouses greater than or equal to 10,000 actual cubic feet per minute, and for all existing bahouses of the top process particulate emitters as defined under subparagraph (c)(28)(A), the operator shall install, operate, calibrate and maintain a COMS or BLDS to monitor baghouse performance and ensure compliance with the opacity limit in subparagraph (d)(1)(A).

(3) The operator shall conduct visible emission observations with EPA Method 22 for process equipment equipped with air pollution control equipment at the following frequency:

(i) Weekly for top process particulate emitters defined under subparagraph (c)(28)(B) that are not equipped with BLDS or COMS;

(ii) Monthly for top process particulate emitters defined under subparagraph (c)(28)(B) that are equipped with BLDS or COMS; and

(iii) Monthly for other process equipment.

(4) The operator shall monitor and record pertinent operating parameters, such as pressure drops, according to the Operation and Maintenance Procedure in paragraph (e)(12) to monitor the performance of air pollution control equipment and ensure compliance with the opacity limit in subparagraph (d)(1)(A).

(5) If the operator receives an alarm from the BLDS, or COMS, the operator shall immediately conduct an EPA Method 22 test and implement all necessary corrective actions to minimize emissions.

(6) If the operator observes visible emissions during any EPA Method 22 test, the operator shall immediately implement all necessary corrective actions to minimize

emissions, and conduct EPA Method 9 test within one hour of any observation of visible emissions.

(7) For the kilns and clinker coolers, the operator shall conduct an annual compliance source test in accordance with the test methods in subdivision (g) to demonstrate compliance with the emission limit(s) in subdivision (d). The first annual compliance source test in accordance with an approved source test protocol shall be conducted within ninety (90) calendar days after the compliance date specified in subdivision (d). The operator shall submit a source test protocol to the Executive Officer no later than sixty (60) calendar days prior to the proposed test date for the Executive Officer's approval for the first compliance source test. The testing frequency may be reduced to once every 24 calendar months if the two most recent consecutive annual source tests demonstrate compliance with the limits. Upon notification by the Executive Officer, the testing frequency shall be reverted back to annual testing if any subsequent source test fails to demonstrate compliance with the limits. In lieu of annual testing, any operator who elects to use all verified filtration products in its baghouses shall conduct a compliance test every five years.

(8) By February 4, 2006, the operator shall provide the Executive Officer a list of the top process particulate emitters as defined under subparagraph (c)(28)(B), and the proposed testing schedule for these equipment. The operator shall conduct compliance source tests on representative baghouses within each process system and submit test results for these processes every 5 years, with at least two source tests conducted in any calendar year. If there are any changes to the list of equipment to be tested or the testing schedule, the operator shall notify the Executive Officer 60 calendar days before the test date.

(9) The operator shall not be required to test non-operational equipment, which is not in operation for at least 6 consecutive months prior to scheduled testing, as indicated in paragraph (e)(8) provided that the operator shall conduct such test within one month after resuming operation.

(10) During any compliance source test, the operator shall monitor and record, at a minimum, all operating data for the selected operating parameters of the control equipment and the process equipment and submit this data with the test report.

(11) The operator shall submit a complete test report for any compliance source test to the Executive Officer no later than sixty (60) calendar days of completion of the source test.

(12) Operation and Maintenance Procedures

(A) The operator shall develop and implement an Operation and Maintenance Procedure to ensure that the performance of the air pollution control equipment is continuously maintained and operated. The Operation and Maintenance Procedure shall include, at a minimum, information on monitoring and recordkeeping procedures, routine maintenance procedures, corrective and preventive actions for the air pollution control equipment, and training related to EPA Method 22, EPA Opacity Test Method 9 and SCAQMD Opacity Test Method 9B, and other applicable information to demonstrate compliance with this rule.

(B) The operator shall develop and implement an Operation and Maintenance Procedure that would require sufficient maintenance of internal roadways and areas, prompt cleanup of any pile of material spillage or carry-back, and application of chemical dust suppressant or other dust control methods to maintain surface stabilization of the open piles, spillage and carry-back to ensure compliance with the opacity standards in paragraph (d)(1) at all times.

(C) The operator shall develop and maintain the Operation and Maintenance Procedures described under subparagraphs (e)(12)(A) and (e)(12)(B) within 6 months after November 4, 2005, and shall make the Operation and Maintenance Procedures available to the Executive Officer upon request.

(f) Reporting and Recordkeeping

(1) The operator shall maintain all records and information required to demonstrate compliance with the provisions of this rule in a manner approved by the Executive Officer for a period of at least five years which shall be made available to the Executive Officer upon request.

(2) The operator of a facility shall keep, at a minimum, the following records to demonstrate compliance:

(A) Daily records of applying chemical dust suppressants, watering, sweeping and cleaning activities;

(B) Appropriate records, on at least a monthly basis, for primary crushers, kilns, raw mills, and finish mills, production records of clinkers and cements and records of raw materials delivered to the facility in order to determine emissions;

(C) Test reports to demonstrate compliance with the emission standards in subdivision (d) including, but not limited to, PM emission rates, and opacity readings;

(D) Records of equipment malfunction and repair for the air pollution control equipment of the top process particulate emitters specified under subparagraph (c)(28)(B);

(E) Daily records of all material handling, including loading and unloading, and storage pursuant to paragraphs (d)(2) and (d)(5);

(F) Monitoring data pursuant to subparagraphs (d)(11), and (d)(12) as applicable, and supporting documentation, including, but not limited to chains of custody and laboratory results;

(G) Hourly records of wind speed and direction pursuant to subparagraph (d)(13);

(H) Records of all maintenance activities pursuant to clause (d)(5)(C)(i) and paragraph (h)(7), including any equipment testing after the repairs and duration of wind fence removal;

(I) Records of clinker pile reclamation, importation, and transport pursuant to clause (d)(5)(C)(i), including duration of wind fence removal; and

(J) Records of all vehicle traffic and monthly average road trips pursuant to paragraph (h)(4).

(3) Monitoring data shall be reported monthly to, and in an electronic format specified by, the Executive Officer. In the event the facility operator finds that an exceedance of the levels specified in subparagraphs (d)(11)(A), (d)(11)(B), or (d)(12)(A) as applicable has occurred, the operator shall report in writing such finding to the Executive Officer, and follow up with a phone call the next business day after such finding.

(g) Test Methods and Calculation

(1) The operator shall use the following source test methods, as applicable, to determine the PM emission rates. All source test methods referenced below shall be the most recent version issued by the respective organization. All test results in units of grains/dscf shall be determined as before the addition of any dilution or air, if present, that was not a part of the stream(s) processed by the device that was tested.

(A) SCAQMD Source Test Method 1.1 or 1.2 – Velocity and Sample Traverse Points;

(B) SCAQMD Source Test Method 2.1 or 2.3 – Stack Gas Flow Rate;

(C) SCAQMD Source Test Method 3.1 – Stack Gas Density;

(D) SCAQMD Source Test Method 4.1 – Stack Gas Moisture;

(E) SCAQMD Source Test Method 5.2 or 5.3 - Determination of Particulate Matter Emissions in which reagent grade acetone shall be used to recover samples from the components of the sampling train located before the particulate filter;

(F) EPA Source Test Method 5 with the impinger analysis may be used in lieu of SCAQMD Source Test Method 5.2 or 5.3.

(G) EPA Source Test Method 5D with the impinger analysis may be used to measure PM emissions from positive pressure fabric filters.

(2) Measurement of particulate matter emissions from the cement kiln shall provide for a correction of sulfur dioxide emissions collected in the particulate matter samples. Any measured gaseous sulfur dioxide emissions shall be excluded from the measurement of particulate matter emissions by subtracting from the mass of material collected in any impingers a mass equivalent to the amount of measured sulfur dioxide emissions based upon sulfuric acid dihydrate as specified in SCAQMD Source Test Methods 5.2 or 5.3.

(3) Source tests for PM shall be taken and the average of the samples shall be used to determine the applicable emission rate in accordance with the following requirements:

(A) Simultaneous duplicate samples shall be obtained unless the operator demonstrates to the satisfaction of the Executive Officer that it is not physically feasible to do so, in which case the operator shall take sequential triplicate samples;

(B) All samples must have minimum sampling volume of 120 cubic feet or a minimum PM catch of 6 milligrams per sample shall be collected;

(C) For duplicate samples, the source test shall be deemed invalid if the difference between the two samples is greater than 35% of the average of the two samples in the applicable units specified in subdivision (d) and if the difference between the sample catches normalized to the average sampling volume is greater than 3.5 milligrams. If the source test is deemed invalid, the test shall be repeated; and

(D) For triplicate samples, upon approval of the Executive Officer or designee, if the operator can demonstrate that the process conditions including, but not limited to, the throughput, quantity, type, and quality of all feedstock

to the equipment process, and the emission control equipment conditions have not changed throughout the sequential test period, then the operator may apply the Dixon outlier test at the 95% significance level to check for and discard one outlier, and shall use the average of the two remaining samples to determine PM emissions.

(4) The operator may use alternative or equivalent source test methods, as defined in U.S. EPA 40 CFR 60.2, if they are approved in writing by the Executive Officer, the California Air Resources Board, and the U.S. Environmental Protection Agency.

(5) The operator shall use a test laboratory approved under the SCAQMD Laboratory Approval Program for the source test methods cited in this subdivision if such approved lab exists. If there is no approved laboratory, then approval of the testing procedures used by the laboratory shall be granted by the Executive Officer on a case-by-case basis based on appropriate SCAQMD protocols and procedures.

(6) The operator shall use the methods specified in the SCAQMD Rule 403 Implementation Handbook to determine threshold friction velocity and stabilized surface; and EPA Opacity Test Method 9 and Method 22, or SCAQMD Opacity Test Method 9B to determine opacity.

(7) When more than one source test method or set of source test methods are specified for any testing, the application of these source test methods to a specific set of test conditions is subject to approval by the Executive Officer. In addition, a violation established by any one of the specified source test methods or set of source test methods shall constitute a violation of the rule.

(h) Exemptions

(1) The operator is exempt from installing a three-sided barrier or enclosure, or using the test methods in the SCAQMD Rule 403 Implementation Handbook for the demonstration of surface stabilization for open storage piles if 90% of the pile's mass consists of materials that are larger than ½ inch. Applicability of this exemption shall be determined through the measurement of any composite sample of at least 10 pounds taken from a minimum depth of 12 inches below the pile surface, and from various locations in the pile, but not from within 12 inches from the base of the pile. This exemption is limited to open storage piles that contain only materials other than clinker, providing that such piles meet the performance standards in subparagraphs (d)(1)(B) and (d)(1)(C).

(2) The operator is exempt from the use of chemical dust suppressants for internal unpaved roads if the use of applicable chemical dust suppressants on that specific unpaved road violates the rules and/or regulations of the local Water Quality Control Board or other government agency provided the operator uses water in sufficient quantity and frequency to stabilize the road surface and the operator notifies the Executive Officer in writing 30 days prior to the use of water.

(3) Haul trucks are not required to use designated roads for haul trucks if they travel on unpaved roads complying with the requirements in clause (d)(7)(A)(ii).

(4) The operator is exempt from the use of chemical dust suppressants in clause (d)(7)(A)(ii) where a road is used less than a monthly average of twice a day by a designated vehicle at a speed limit less than 15 miles per hour.

(5) The operator is exempt from the use of chemical dust suppressants on unpaved areas specified in clause (d)(7)(A)(ii) during a period for demolition activities of no longer than six (6) calendar months provided that the operator uses water in sufficient quantity and frequency to stabilize the unpaved areas, meets the opacity requirements in subparagraphs (d)(1)(B) and (C) at all times, and keeps sufficient records to demonstrate compliance.

(6) With the exception of primary crushing, open material storage piles, and covers and existing enclosures for conveying systems, the provisions of this rule shall not apply to equipment or operations that are subject to Rule 1157 or Rule 1158 located at the cement manufacturing facilities, provided that there is no backsliding from the current level of control as stated in the permits approved by the Executive Officer prior to November 4, 2005 or as required under Rule 1157 and Rule 1158, whichever is more stringent.

(7) The operator is exempt from the requirements in clause (d)(5)(C)(i) in the event the wind fence material needs to be removed to perform periodic maintenance of the clinker crane or building. During the time the wind fence material is removed, the clinker crane shall not actively transport clinker material in the building, except for post maintenance equipment testing.

(8) During day(s) in which the instantaneous wind speeds exceed 25 mph using the on-site wind monitoring equipment pursuant to (d)(13)(A), the operator is exempt from the hexavalent chromium and PM10 averaging provisions of subparagraphs (d)(11)(A) and (d)(11)(B), and (d)(12)(A) as applicable, provided all open handling of clinker material is ceased and dust controls are applied pursuant to subparagraph (d)(13)(B). If the Executive Officer determines a significant potential of re-entrained hexavalent chromium containing dust from the facility

exists during such high wind events, the operator shall implement an approved Mitigation Monitoring Plan to minimize exposure to the surrounding area and to ensure implementation of all applicable dust control measures to meet the requirements of subparagraphs (d)(11)(A) and (d)(11)(B), and (d)(12)(A), as applicable. The Mitigation Monitoring Plan is due 90 days, inclusive of appropriate plan fees pursuant to Rule 306, after notification by the Executive Officer.

(Adopted January 7, 2005)(Amended September 8, 2006)

RULE 1157. PM10 EMISSION REDUCTIONS FROM AGGREGATE AND RELATED OPERATIONS

(a) Purpose

The purpose of this rule is to reduce PM10 emissions from aggregate and related operations.

(b) Applicability

This rule applies to all permanent and temporary aggregate and related operations, unless otherwise exempt under subdivision (h).

(c) Definitions

(1) AGGREGATE OPERATIONS are defined as operations that produce sand, gravel, crushed stone, and/or quarried rocks.

(2) AGGREGATE OR RELATED MATERIAL means material that is produced and/or used by the aggregate and related operations.

(3) AGGREGATE TRUCKS mean trucks with open tops, used to transport the products of the aggregate and related operations to other processors, retailers, or end users.

(4) BLASTING OPERATIONS are defined as operations that break or displace rock by means of explosives.

(5) BUNKER is defined as a three-sided enclosure of which one side may be a windscreen with a maximum porosity of 20%.

(6) CARRY-BACK is defined as materials that fall off the underside of the conveyor belt and accumulate on the ground.

(7) CHEMICAL STABILIZERS are any non-toxic chemical dust suppressant. The chemical stabilizers shall meet any specifications, criteria, or tests required by any federal, state, or local water agency.

(8) CONVEYOR means an above-ground, outdoor conveyor system to move materials from any location, process, or equipment to another in a continuous fashion.

(9) DISTURBED SURFACE AREA means a portion of a 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 completely covered by a permanent structure; or

(C) sustained a vegetative ground cover of at least 70 percent of the native cover for a particular area for at least 30 days.

(10) DUST SUPPRESSANTS are water, hygroscopic materials, or chemical stabilizers used as a treatment material to reduce fugitive dust emissions.

(11) ENCLOSED SCREENING EQUIPMENT means screening equipment where the top portion of the equipment is enclosed, except for the area where materials enter the screening equipment.

(12) END OF WORK DAY means the end of a working period that may include one or more work shifts, but no later than 8 p.m.

(13) EQUIPMENT BREAKDOWN means an unforeseeable impairment of an air pollution control equipment or related operating equipment which causes a violation of any emission limitation or restriction prescribed by this rule or by State law and which: is not the result of neglect or disregard of any air pollution control law, rule, or regulation; is not a recurrent breakdown of the same equipment; and, does not constitute a nuisance as defined in the State of California Health and Safety Code, Section 41700, with the burden of proving the criteria of this section placed upon the person seeking to come under the provisions of this rule.

(14) EXISTING FACILITY/OPERATION means a facility or an operation that has begun to operate, or has an application for Permit to Construct that has been deemed complete by the Executive Officer on or before December 3, 2004.

(15) FRONT-END LOADER means a wheeled or tractor loader, with a bucket or fork hinged to lifting arms that loads or digs entirely at the front end.

(16) 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 any person.

(17) GEOTEXTILE means permeable textile, including but not limited to, mesh, net, or even grid that is used in contact with soil or rocks with the purpose of adding stability to the gravel pad.

(18) HAUL ROAD means an unpaved road that is used by haul trucks to carry materials from the quarry to different locations within the facility.

(19) HAUL TRUCK means a diesel heavy-duty truck having a minimum capacity of 50 tons and is used to transport aggregates within the facility.

(20) HIGH WINDS means instantaneous wind speeds exceed 25 miles per hour.

(21) INFREQUENT MINING OPERATIONS mean operations that have state mine IDs, approved reclamation plans and bonding as required by State Mining and Reclamation Act of 1975, and only operate on an average of 52 days per year over the past three years from December 3, 2004.

(22) INTERNAL ROADS mean private paved and unpaved roads within the facility's property boundary.

(23) LOADING means an activity to move materials from any location to a truck.

(24) MATERIAL SPILLAGE means material inadvertently lost or scattered by spilling.

(25) MIXER TRUCK means truck that mixes cement and other ingredients in a drum to produce concrete.

(26) NEW FACILITY/OPERATION means a facility or an operation that has not begun to operate, or does not have an application for Permit to Construct that has been deemed complete by the Executive Officer as of December 3, 2004.

(27) NON-POROUS WALLS are walls that have zero percent porosity. Non-porous walls include but are not limited to concrete and steel walls.

(28) OPEN STORAGE PILE is any accumulation of aggregate or related material 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.

(29) OTHER DUST CONTROL METHODS including but not limited to baghouses, filter bags, enclosures, and partial enclosures.

(30) PAVED ROAD means a public or private improved street, highway, alley, public way, or easement that is covered by typical roadway materials, but

excluding access roadways that connect a facility with a public paved roadway 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.

(31) PERMANENT FACILITY/OPERATION means a facility or an operation that is performed at one physical location for more than two years.

(32) PM10 means particulate matter with an aerodynamic diameter smaller than or equal to 10 microns as measured by the applicable State and Federal reference test methods.

(33) PRODUCTION WORK SHIFT is an eight hour operating period based on the 24 hour operating schedule.

(34) RELATED OPERATIONS are defined as operations that use sand, gravel, cement, crushed stone, and/or quarried rocks in their products, or crush miscellaneous base, and inert landfills that handle construction/demolition debris.

(35) RETURNED PRODUCTS mean left over concrete or asphalt products that were not used at the job sites and were brought back to the facility.

(36) RUMBLE GRATE is a system where the vehicle is vibrated while traveling over grates with the purpose of removing dust and other debris.

(37) SCALPING SCREEN means a screen where debris and oversized materials are rejected.

(38) SENSITIVE RECEPTOR is a school (kindergarten through grade 12), licensed daycare center, hospital, or convalescent home.

(39) SILO means an elevated storage container, with or without a top, that releases material through the bottom.

(40) STABILIZED SURFACE means 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. Stabilization can be demonstrated by one or more of the applicable test methods contained in the Rule 403 Implementation Handbook.

(41) STAGING AREA is a place where aggregate and mixer trucks temporarily queue for their loading or unloading turn.

(42) TEMPORARY FACILITY/OPERATION means a facility that operates or an operation that is performed at one physical location for two years or less. Temporary facility/operation includes portable facility/operation.

(43) TRACK-OUT means any material that adheres to and agglomerates on the exterior surface of motor vehicles, haul trucks, and equipment (including tires) that has been released onto a paved road and can be removed by a vacuum sweeper or a broom sweeper under normal operating conditions.

(44) TRANSFER means an activity to move materials from any location to any location within a facility.

(45) TRANSFER POINT is a point in a conveying system where the materials are dropped onto a stockpile, equipment, or another conveyor, or where a conveyor belt enters or exits the processing equipment.

(46) TRUCK TRIMMING AREA means an area where trucks that are exiting a facility/operation are inspected to determine whether the amount and type of loaded material is correct. Any excess material is removed in this area of the facility/operation.

(47) TRUCK WASHER means a system that is used to wash the entire surface and the tires of a truck.

(48) TUNNEL FEED is underground belt conveyor system to move the materials from any location to any location within a facility in a continuous fashion.

(49) TYPICAL ROADWAY MATERIALS means concrete, asphaltic concrete, recycled asphalt, asphalt, or any other material of equivalent performance as determined by the Executive Officer and the U.S. EPA.

(50) UNLOADING means an activity to release the materials from a truck or a front-end loader to any location located inside the facility.

(51) UNPAVED ROADS mean any roads, equipment paths, or travel ways that are not covered by typical roadway materials. Public unpaved roads are any unpaved roadway owned by Federal, State, county, municipal or other governmental or quasi-governmental agencies. Private unpaved roads are all other unpaved roadways not defined as public. Internal unpaved roads are private unpaved roads within the facility's property boundary.

(52) WATER IRRIGATION SYSTEM means devices that are mounted above an open storage pile to deliver water to a pile.

(53) WHEEL WASHER means a system that is capable of washing the entire circumference of each wheel of the vehicle.

(54) VALIDATED NOTICE OF VIOLATION means a notice of violation issued by a District enforcement officer that has been finally resolved by means of either a settlement with the alleged violator resulting in the payment of a civil penalty in any amount or a court judgment imposing civil or criminal liability on the alleged violator based on the conduct alleged in the notice of violation.

(d) Requirements

Unless otherwise stated, effective July 1, 2005, aggregate and related operations shall comply with the following requirements:

(1) General Performance Standards

(A) The operator of a facility/operation shall not cause or allow:

(i) a discharge into the atmosphere of, fugitive dust emissions exceeding 20 percent opacity from any activity, equipment, storage pile, or disturbed surface area, based on an average of 12 consecutive readings, using the SCAQMD Opacity Test Method No. 9B; or

(ii) discharges into the atmosphere of, fugitive dust emissions exceeding 50 percent opacity from any activity, equipment, storage pile, or disturbed surface area, based on five individual, consecutive readings, using the SCAQMD Opacity Test Method No. 9B, effective December 3, 2005; or

(iii) any visible fugitive dust plume from exceeding 100 feet in any direction from any activity, equipment, storage pile, or disturbed surface area.

(B) The operator of a facility/operation shall promptly remove any pile of material spillage on any internal paved roads. Alternatively, the operator shall maintain in a stabilized condition the pile of material spillage with dust suppressants and remove it by the end of each day.

(C) The operator of a facility/operation shall maintain in a stabilized condition all other piles of material spillage and carry-back with dust suppressants until removal.

(D) The operator of a facility/operation shall use sufficient dust suppressants or other dust control methods as necessary to meet the performance standards in subparagraph (d)(1)(A).

(E) Where applicable, the operator shall install a gravel pad that:

(i) Contains one-inch or larger washed gravel maintained to a depth of six inches;

(ii) Has a geotextile lining underneath the washed gravel; and

(iii) Is flushed with water or is completely replaced, as necessary to comply with the track out threshold set forth in Rule 403.

(2) Loading, Unloading, and Transferring

The operator of an existing permanent or temporary facility/operation shall use dust suppressants or other dust control methods at each emission source during loading, unloading, or transferring activities of materials as necessary to meet the performance standards in subparagraph (d)(1)(A).

(3) Conveyor

The operator of a facility/operation using a conveyor shall apply dust suppressants or other dust control methods at the conveyor including all transfer points where materials are released as necessary to meet the performance standards in subparagraph (d)(1)(A).

(4) Crushing Equipment

The operator of a facility/operation conducting crushing activities of materials shall use baghouses to control PM10 emissions. Alternatively, the operator may apply dust suppressants or other dust control methods at the crusher including all discharge points as necessary to meet the performance standards in subparagraph (d)(1)(A).

(5) Screening Equipment

The operator of a facility/operation conducting outdoor screening activities of materials shall use enclosed screening equipment that is equipped with a baghouse. Alternatively, the operator may apply dust suppressants or other dust control methods at the screening equipment including all discharge points during such activities as necessary to meet the performance standards in subparagraph (d)(1)(A).

(6) Storage Piles

(A) The operator of a facility/operation shall maintain in a stabilized condition the entire surface area of the open storage piles of materials, except for areas of the piles that are actively disturbed during the loading and/or unloading activities. Alternatively, the operator may:

(i) store materials in a silo or a bunker;

(ii) maintain at least two feet of freeboard from the highest portion of the piles; and

(iii) for the bunker, stabilize the sides of the pile that are not shielded by non-porous walls.

(B) At the end of each work day in which loading or unloading activities of materials were performed, the operator of a facility/operation shall re-apply dust suppressants to re-stabilize disturbed areas of the piles.

(C) The operator of a facility/operation shall not allow any open storage piles of materials to be greater than eight feet height if such piles are located within 300 feet of off-site occupied buildings or houses. Alternatively, the operator of a facility/operation shall operate a water irrigation system to maintain in a stabilized condition the entire surface of the piles.

(7) Internal Roads

(A) Unpaved Haul Roads

(i) The operator of a facility/operation shall apply chemical stabilizers on the internal unpaved haul roads so that the surface is maintained in a stabilized condition.

(ii) The operator of a facility/operation shall post signs at the two ends of the internal unpaved haul roads, stating that haul trucks shall use these roads unless traveling to the maintenance areas.

(B) Unpaved Non-Haul Roads and Parking and Staging Areas

The operator of a facility/operation shall apply chemical stabilizers on such unpaved roads and parking and staging areas so that the surface is maintained in a stabilized condition, or apply a gravel pad that meets the criteria set forth in subparagraph (d)(1)(E) on

the entire unpaved non-haul road and/or the parking and staging areas.

(C) Paved Roads

(i) The operator of a facility/operation with a minimum of 60 aggregate and/or mixer trucks exiting the facility on any day shall sweep the internal paved roads with a street sweeper by the end of each production work shift.

(ii) The operator of a facility/operation with less than 60 aggregate and/or mixer trucks exiting the facility on any day shall sweep the internal paved roads with a street sweeper by the end of every other work day. On the days that the roads are not swept, the operator shall apply water as necessary to comply with subparagraph (d)(1)(A) on at least 100 feet of paved roads, or the entire length of paved roads leading to an exit to public paved roads, if such roads are less than 100 feet long.

(iii) Sweepers that are purchased after December 3, 2004 shall meet the criteria of PM10-efficient Rule 1186-certified sweepers.

(iv) The operator of a new facility/operation shall use Rule 1186-certified-sweepers to sweep the internal paved roads.

(8) Track-Out

(A) The operator of a facility/operation and the drivers must take all reasonable steps to ensure that all loads on aggregate trucks are leveled and maintained with at least 6 inches of freeboard, and that the load is stabilized by applying dust suppressants in sufficient quantities so that the performance standards in subparagraph (d)(1)(A) are met, unless the driver tarps or suitably covers the load prior to entering paved public roads or prior to the use of a rumble grate and/or wheel washer.

(B) The operator of a facility/operation must post signs at the exits of the facility to require all loads to comply with the requirements in subparagraph (d)(8)(A).

(C) Effective December 3, 2005, the operator of a facility/operation not covered under subparagraph (d)(8)(D) shall install and utilize a

rumble grate, a wheel washer, or a truck washer in accordance with the following:

(i) The rumble grate, the wheel washer, or the truck washer shall be located no less than 30 feet prior to each exit that is used by aggregate and/or mixer trucks and leading to a paved public road;

(ii) The operator must ensure that all aggregate and mixer trucks leaving the facility go through the rumble grate, the wheel washer, or the truck washer;

(iii) The operator shall post a sign by the rumble grate, the wheel washer, or the truck washer to designate the speed limit to 5 miles per hour for using such control equipment; and

(iv) If the internal road from the rumble grate, the wheel washer, or the truck washer to any paved public road is not paved, the operator shall apply a gravel pad that meets the criteria set forth in subparagraph (d)(1)(E) to such roads.

(v) An operator is not subject to clause (d)(8)(C)(i) if he can demonstrate to the Executive Officer, by July 1, 2005, that there is not adequate space for 30 feet of roadway and that a rumble grate, a wheel washer, or a truck washer at a shorter distance will be adequate to prevent track out of dust to the public road. The operator of a new, temporary facility/operation shall provide such demonstration to the Executive Officer prior to the beginning of its operation.

(D) Effective December 3, 2005, the operator of a new permanent facility/operation with land size in excess of 25 acres or with a designed daily throughput of 750 tons, and the operator of an existing permanent facility/operation with a minimum of 60 aggregate and/or mixer trucks exiting the facility on any day shall install and utilize a rumble grate and a wheel washer in accordance to the following:

(i) The rumble grate and the wheel washer shall be located no less than 30 feet prior to each exit that is used by aggregate and/or mixer trucks and leading to a paved public road.

The rumble grate shall be located within 10 feet from the wheel washer.

(ii) The operator must ensure that all aggregate and mixer trucks leaving the facility go through the rumble grate first and then, the wheel washer.

(iii) The operator shall post a sign by the rumble grate to designate the speed limit to 5 miles per hour for traveling over the rumble grate and wheel washer.

(iv) The operator shall pave the internal roads from the rumble grate and the wheel washer to the facility exits leading to paved public roads.

(v) The operator must ensure that all aggregate and mixer trucks stay on the internal paved roads between the wheel washer and the facility exits leading to paved public roads.

(vi) An operator is not subject to clause (d)(8)(D)(i) if he can demonstrate to the Executive Officer, by July 1, 2005, that there is not adequate space for 30 feet of roadway and that a rumble grate and a wheel washer at a shorter distance will be adequate to prevent track out of dust to the public road. The operator of a new, permanent facility/operation shall provide such demonstration to the Executive Officer prior to the beginning of its operation.

(E) The operator of a facility/operation shall provide the "Fugitive Dust Advisory" information prepared by the District to the aggregate and/or mixer truck company and/or broker at least once each calendar year.

(9) The operator of a new permanent facility/operation shall comply with all requirements set forth in this rule and apply Best Available Control Technology required by the Executive Officer.

(10) New and/or modified equipment shall comply with 40 CFR Part 60, Subpart I and/or 40 CFR Part 60, Subpart OOO as appropriate.

(e) Recordkeeping:

The operator of a facility/operation shall keep the following records on-site for 3 years, or 5 years for Title V facility, and make such records available to the Executive Officer upon request:

(1) Records of watering and sweeping schedule for internal paved roads;

(2) Records of aggregate and/or mixer trucks exiting the facility;

(3) Records of "Fugitive Dust Advisory" information distribution;

(4) Records of new equipment initial start-up and/or existing equipment start-up after a repair to fix an equipment breakdown if seeking exemption pursuant to subparagraphs (h)(1)(B) and/or (h)(1)(C);

(5) Records of scheduled maintenance activities if seeking exemption pursuant to subparagraph (h)(1)(A);

(6) Records of aggregate materials that meet the descriptions in subparagraphs (h)(2)(A) and (h)(2)(B); and

(7) Records of operating days if seeking exemption pursuant to subparagraph (h)(10)(D).

(f) Test Methods

The following test methods shall be used to determine compliance with this rule:

(1) SCAQMD Opacity Test Method No. 9B

(2) The Stabilized Surface Test Method included in the SCAQMD Rule 403 Implementation Handbook.

(g) Additional Requirements Triggered by Recurrent Violation:

(1) The operator of an existing facility located within 500 meters of off-site occupied buildings or houses or a sensitive receptor, who accrues three or more validated notices of violation for causing or allowing fugitive dust emissions exceeding the opacity limits in clauses (d)(1)(A)(i) as measured by the test methods in (f), or a visible fugitive dust plume exceeding 100 feet in any direction, issued on separate days for violations from the same emission source at the facility in any continuous twelve month period ("recurrent violations") starting from December 3, 2005 shall, within 30 days of the third notice of violation being validated, submit an emission reduction plan to the Executive Officer that meets the following requirements:

(A) The plan must propose additional emission control measures sufficient to remedy the causes of the recurrent violations and prevent future violations; and

(B) It must provide for implementation of the specified additional control measures at the earliest practicable date.

(2) The Executive Officer shall approve the emission reduction plan within 30 days of receipt of a complete plan if it is determined that implementation will likely remedy the causes of the recurrent violations. The Executive Officer may impose additional conditions in the plan if it is determined necessary to remedy the causes of the recurrent violations, however, the Executive Officer may not require, as a condition to approving an emission reduction plan under this paragraph, an operator to implement control measures that are economically or technologically infeasible, that do not directly address the cause of the recurrent violations, or that require the operator to take responsibility for the conduct of a third party over whom the operator has no legal control. A disapproval or conditional approval of a plan by the Executive Officer may be appealed to the Hearing Board.

(3) The Executive Officer shall disapprove any plan that does not demonstrate a substantial likelihood of preventing violations in the future. If a plan is disapproved, the responsible party shall submit a revised plan which cures the defects within 30 days of receipt of notice of disapproval.

(h) Exemptions

(1) The following activities will be exempt from requirements set forth in subparagraph (d)(1)(A):

(A) The first 8 hours of the new equipment initial start-up and the first 2 hours of the equipment start-up after a repair to fix an equipment breakdown or after a maintenance activity scheduled at least 48 hours in advance by the operator of a facility.

(B) Blasting operations.

(2) During high winds, the operator of a facility/operation will be exempt from the requirements in subparagraph (d)(1)(A) if:

(A) All activities, including aggregate excavation, production, loading and unloading activities, and material transport, are ceased, except for dust controls as required by District rules; or

(B) All excavation and earthmoving operations, except for underwater dredging and the transporting of dredged materials to the surge pile, and aggregate production (but not loading or transport) are ceased, provided:

(i) dust controls as required by District rules are applied; and

(ii) unpaved roads have had chemical stabilizers applied prior to the wind event, or where unpaved roads have not had chemical stabilizers applied, water is applied twice per hour during active operations; and

(iii) within fifteen (15) minutes of each loading activity, water is applied to un-stabilized areas of open storage piles that will be actively disturbed during loading; or

(C) The only activities being conducted at ready-mixed concrete or hot mix asphalt facilities are those activities that produce materials for use in construction projects which are being paved or poured during high winds, provided that dust controls as required by District rules are applied.

(3) Scalping screens will be exempt from the enclosure required in paragraph (d)(5).

(4) The operator of a facility/operation is exempt from the use of chemical stabilizers for internal unpaved roads if the use of applicable chemical dust suppressants on those specific unpaved roads violates the rules and/or regulations of the local Water Quality Control Board or other government agency. Alternatively, the operator of a facility/operation may use water, proving that:

(A) Water is used in sufficient quantity and frequency on those specific internal unpaved roads so that the surface is maintained in a stabilized condition; and

(B) The operator notifies the Executive Officer in writing 30 days prior to the use of water and demonstrates that the use of chemical was not allowed on those specific unpaved roads.

(5) Empty haul trucks traveling to and from maintenance areas are exempt from the requirement to use internal unpaved haul roads if they travel on internal unpaved non-haul roads that comply with the requirement in subparagraph (d)(7)(B).

(6) The unpaved non-haul roads will be exempt from the requirement in subparagraph (d)(7)(B) if such roads are used less than twice a day, and signs are posted on such roads to restrict speed limit to 15 miles per hour and to restrict traffic to such vehicles only.

(7) Carry-back that is generated by the tunnel feed will be exempt from the requirement set forth in subparagraph (d)(1)(C).

(8) Truck trimming areas are exempt from the requirement in subparagraph (d)(1)(C).

(9) Facilities where aggregate trucks are not used to carry aggregate or related materials to and off the facility property are exempt from the requirements in paragraph (d)(8).

(10) The following are not required to install and operate a wheel washer:

(A) Facilities that have their internal roads all paved and with the exception of returned products, their aggregate or related materials metered directly to a ready-mix or hot mix asphalt truck. The facilities may accept returned products and are still qualified for the exemption from a wheel washer. The facilities are instead required to have a rumble grate or a truck washer and comply with subparagraph (d)(8)(C).

(B) Facilities with less than 5 acres in land size and handle recycled asphalt and recycled concrete exclusively, provided the facility installs a rumble grate, comply with clauses (d)(8)(C)(i) through (d)(8)(C)(iii), and applies a gravel pad that meets the criteria set forth in subparagraph (d)(1)(E) on the entire unpaved non-haul roads leading to a paved public road.

(C) Facilities that pave a minimum of ¼ mile from the rumble grate to the facility exit leading to a paved public road.

(D) Facilities that are infrequent mining operations, provided they install a rumble grate and apply a gravel pad that meets the criteria set forth in subparagraph (d)(1)(E) for a distance of no less than 100 feet from the rumble grate to the facility exit leading to a paved public road, and keep records in accordance with paragraph (e)(6). The facility shall inform the District in the case that they operate more than 52 days per year based on the average of a rolling 3 year period after December 3, 2004. In this case, the facility shall comply with the requirements set forth in paragraph (d)(8).

(11) The operator of a facility/operation is exempt from using the test methods set forth in paragraph (f)(2) for the demonstration of the surface

stabilization of open storage piles where 90% of their volume contain materials that are larger than ½ inch product, providing such piles meet the performance standards in subparagraph (d)(1)(A).

(i) Alternative Control Options

In lieu of using dust suppressants, the operator of a facility/operation may submit for approval by the Executive Officer and the U.S. Environmental Protection Agency a plan for achieving equivalent emission reductions through alternative control measures.

(Adopted December 2, 1983)(Amended June 11, 1999)
(Amended July 11, 2008)

RULE 1158. STORAGE, HANDLING, AND TRANSPORT OF COKE, COAL AND SULFUR

(a) Purpose

The purpose of this rule is to reduce the emissions of airborne particulate matter from the storage, handling, and transport of coke, coal and sulfur; and to reduce the potential for the storage, handling and transport of these materials to violate AQMD Rules 402 – Public Nuisance and 403 – Fugitive Dust.

(b) Applicability

This rule applies to the operator of a facility that produces, stores, handles, transports, or uses coke, coal or sulfur.

(c) Definitions

For the purpose of this rule:

(1) ACCUMULATION is any surface deposit of material greater than three ounces in one square foot other than inside an approved storage area, conveyor, transport vehicle, coker pit, slurry bin, water collection channel or separation pond.

(2) AQMD PERMITTED FACILITY is a facility that has material storage or handling equipment required to have permits to operate from the AQMD.

(3) BEST AVAILABLE CONTROL MEASURES represent fugitive dust control actions which are required to be implemented within the boundaries of the South Coast Air Basin. A detailed listing of best available control measures for each fugitive dust source type shall be as contained in the most recent Rule 403 Implementation Handbook, now or hereafter adopted by the Governing Board.

(4) CALCINED COKE is coke which has been processed in a kiln.

(5) CHEMICAL STABILIZER is any non-toxic chemical dust suppressant which is not prohibited for the uses proposed in this Rule or by any other applicable law, and which meets all applicable specifications required by any federal, state, or local water agency.

(6) COAL is a solid, brittle, carbonaceous rock classified as anthracite, bituminous, subbituminous, or lignite by ASTM Designation D388-77.

(7) COKE is a solid carbonaceous residue produced from a coker after cracking and distillation from petroleum refining operations.

(8) COKER PIT is an open-top containment area at a refinery coker unit used to contain cut or cracked petroleum coke.

(9) CONTAMINATED MATERIAL means a material that has become mixed with other materials or dirt so that it is no longer considered material or no longer meets marketable product specifications.

(10) CONVEYOR SHUTTLE or TRAVELER or TRIPPER is a device supporting a conveyor that can travel forwards or backwards along a feed conveyor as needed to allow the conveyor to load material onto a selected area of a ship or pile.

(11) DEWATERING TRUCK-LOADING BIN is a cylindrical tank with a funnel-shaped bottom which receives material in a slurry form and separates the solids from water by filters and gravity, eventually discharging the solids into a truck.

(12) DRY MATERIAL is any coke, coal, or sulfur, that does not meet this Rule's definition for moist material.

(13) ENCLOSED CONVEYOR is a conveyor which is totally enclosed in a tube or encompassed 360 degrees within a solid plane structure, or an equivalent conveying system as approved by the Executive Officer.

(14) ENCLOSED STORAGE is any completely roofed and walled structure or building, including a truck or railcar covered pursuant to subparagraphs (d)(12)(A), (B), (C), or (D), surrounding an entire coke, coal or sulfur pile.

(15) 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 AQMD, 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.

(16) FREEBOARD is the distance from the top of the material storage section of the truck trailer to the top of the material load at its highest point.

(17) FUGITIVE DUST means any solid particulate matter that becomes airborne by natural or man-made activities, excluding particulate matter emitted from an exhaust stack.

(18) HIGH WIND CONDITIONS is when wind speeds exceed 15 miles per hour.

(19) LOOSE means material that can be swept off a surface by a person using a whisk broom.

(20) MATERIAL means any substance containing at least 50% by weight of coke, coal, or sulfur. The percent by weight shall be determined by at least a one ounce sample taken at any random point.

(21) MOIST MATERIAL is material that has a moisture content that in no place is less than the following: coke material 8.3%, coal material 7.6%, and sulfur material 2.8%.

(22) NON-LUMP MATERIAL means any coke, coal, or sulfur material which can pass through a 6.3 millimeter sieve (1/4 inch opening).

(23) OPEN STORAGE is any material coke, coal or sulfur pile that is not in enclosed storage.

(24) PAVED means improved by covering with concrete, asphaltic concrete, recycled asphalt, or asphalt.

(25) PERMANENT WATER RECYCLING SYSTEM DEWATERING BED is a below-ground, open-top containment vessel, used in conjunction with a water reclamation system, to reduce moisture content of bulk material removed from a water clarifier for the purpose of disposal.

(26) PILE means any amount of coke, coal or sulfur material which attains a height of three feet or more, or a total surface area of 150 square feet or more.

(27) PRILLED SULFUR is a product formed in a wet process involving the contact of heated liquid sulfur with cooled water, resulting in a sphere-like solid.

(28) ROAD means any route with evidence of repeated prior travel by vehicles.

(29) SEPARATION POND means a container for separating coke from water by gravity, which has a liquid water surface at all points.

(30) SILT is any particulate, including but not limited to coal, coke, or sulfur, with a particle size less than 75 micrometers in diameter as measured by a No. 200 sieve.

(31) SLURRY BIN is a container located at a refinery coker unit or its associated coke handling system holding a watery mixture of material.

(32) STREET SWEEPER is, if purchased or contracted for before January 1, 2000, a vacuum or regenerative air street sweeper, and if purchased or contracted for

on or after January 1, 2000, is a PM10 street sweeper pursuant to Rule 1186 – PM10 Emissions from Paved and Unpaved Roads & Livestock Operations.

(33) SULFUR is a chemical element, atomic number 16 on the periodic chart, and which is found in crystalline or amorphous form.

(34) TELESCOPING LOADING CHUTE is a length adjustable chute which completely encloses the material during ship loading operations.

(35) TRACKIN – TRACKOUT ROAD is a road (excluding freeways), starting from the entrance or exit of the facility property and continuing away from the property for the first quarter mile of the road, that a truck trailer, used for material transport, travels on.

(36) TRANSFER POINT is the point in the storage, handling or transport process where material being moved, carried, conveyed, or transported is dropped or deposited.

(37) VEHICLE is any car, truck, in-service transportation, or off-road mobile heavy equipment.

(38) WATER SPRAY SYSTEM means a dust suppression technique that uses water or water-based solutions delivered through pipes, tubes, or hoses that are fitted with one or more nozzles and operated at pressures ranging from 1 to 1500 psi.

(39) WIND SCREENS are structures that are sufficient to deflect the wind away from conveyed material and reduce fugitive dust emissions, and are adjacent to both sides of and extend along the entire length of the conveyor, tall enough to extend above and below the conveyor and material.

(d) Any facility that produces, handles, transports, or stores coke, coal, or sulfur material for transfer or shipment shall comply with all of the following requirements:

(1) The facility operator shall not cause, or allow the discharge into the atmosphere of, fugitive dust for a period or periods aggregating more than three minutes in any one hour which is equal to or greater than 10% opacity (equivalent to 10% opacity under EPA Method 9 or one half of No. 1 on the Ringelmann Chart, as published by the United States Bureau of Mines).

(2) The facility operator shall maintain all piles in enclosed storage.

(A) Structures or buildings used for enclosed storage shall be properly maintained, equipped with and use as needed, a water spray system or permitted air pollution control equipment sufficient to control fugitive

dust emissions at designed vents and at entrances or exits for material or vehicles so as not to violate the provisions of paragraph (d)(1).

(B) Any entrance or exits for material or vehicles shall have overlapping flaps, sliding doors or other devices(s) approved by the Executive Officer, which shall remain closed except to allow material or vehicles to enter and leave or when people are inside.

(C) For coal and prilled sulfur piles existing before June 11, 1999, the facility operator may achieve compliance with outdoor storage provided that the Executive Officer approves an open pile control plan, pursuant to subdivision (f).

(3) The facility operator shall only conduct material truck unloading in an enclosed structure that is either equipped with a water spray system to be used as needed to prevent visible dust emissions or vented to permitted air pollution control equipment that is operated during unloading activities. The ends of the structure shall have overlapping flaps that reduce the opening to no greater than 11 feet high by 10 feet wide, sliding doors which shall remain closed except to allow the trucks to enter and leave, or other equally effective devices as approved by the Executive Officer.

(4) The facility operator shall only conduct railcar material unloading in an enclosed structure that is either equipped with a water spray system operated to prevent visible dust emissions, or vented to permitted air pollution control equipment that is operated during unloading activities. The ends of the structure shall have overlapping flaps, sliding doors or other equally effective devices as approved by the Executive Officer, which shall remain closed except to allow the railcars to enter and leave.

(5) The facility operator shall pave and maintain as paved, the following areas:

(A) All ground surfaces within the facility where material accumulations routinely occur; and,

(B) All roads and vehicle movement areas within the facility that are used for transporting or moving material excluding AQMD permitted material enclosures and areas approved by the Executive Officer for material storage pursuant to other sections of this Rule.

(6) When transport is by truck, the facility operator shall only receive or transfer material in truck trailers that, within one quarter mile of the perimeter of the facility, are driven only on paved roads.

(7) In order to clean roads of accumulations, the facility operator shall comply with either (A) or (B):

(A) The facility operator shall prevent and remove any material so that the following limits are not exceeded:

(i) A silt loading value, for all silt particles, of 0.05 grams/meter^2 for any trackout road, excluding freeways and railroad tracks; and

(ii) A silt loading value, for all silt particles, of 0.25 grams/meter^2 for all roads and vehicle movement areas excluding railroad tracks within the facility that are used for transporting or moving material.

(B) The facility operator shall use a street sweeper to clean any trackin – trackout road and any road inside the facility, used to transport material.

(i) The street sweeping shall be sufficient so that not more than 4 hours elapses between each street sweeper cleaning or after every 100 truck material receipts or dispatches, but not less than one time daily when the facility is open for business.

(ii) Each 24-hr. day, the day beginning at 12:01 A.M., the facility operator shall designate and record whether for that day the facility operator is street sweeping every four hours or every 100 trucks. The record shall show the date and time when street sweeping was performed and the truck count.

(iii) Facility operators shall begin cleaning up material spills of more than three pounds, or that cover more than a square foot, within one hour and continue clean up operations until the spill is removed.

(C) Prior to the beginning of each calendar quarter the facility operator shall designate and record which alternative, A or B, the facility operator is choosing to comply with during the quarter.

(D) A violation of subparagraph (d)(7)(C) shall be considered a violation of paragraph (d)(7).

(8) The facility operator shall maintain all areas within the facility, except for those areas subject to paragraph (d)(7), free of any accumulation, unless the accumulation is:

(A) moist material;

(B) dry material not higher than three inches, except for crushed prilled sulfur which shall be removed; or

(C) completely covered.

(9) Any new or replacement conveyors constructed after June 11, 1999 shall be enclosed conveyors. For purposes of this paragraph, the installation of a conveyor between two transfer points shall be a replacement conveyor. For conveyors existing before June 11, 1999, the facility operator shall, except for prilled sulfur, only conduct material conveying in compliance with either:

(A) All non-lump material shall be moist material; or,

(B) The material shall be conveyed in an enclosed conveyor(s).

(10) The facility operator shall, except for prilled sulfur, maintain all material transfer points in compliance with one of the following:

(A) Total enclosure;

(B) Water spray system sufficient to control fugitive dust emissions during operations to comply with paragraph (d)(1);

(C) vented to permitted air pollution control equipment which is in full operation;

(D) Transfer only moist material and conduct such transfer only in an overhead truck trailer or railcar loader, or chute with a hopper, such that the exposed drop does not exceed four feet from the top of the truck or railcar; or,

(E) Controlled by another equivalent method approved, in writing, by the Executive Officer.

(11) The facility operator shall only load materials into ships through a telescoping loading chute which uses a water spray system, or an air pollution control system, sufficient to control fugitive dust emissions during operations to comply with paragraph (d)(1), and:

(A) Is extended to within five feet of the top of the pile; or,

(B) Is at least 5 feet below the hatch coaming.

(12) The facility operator of an AQMD permitted facility shall not load material into any truck trailer or railcar unless it is subsequently and immediately covered, before leaving the facility, in one of the following manners sufficient to prevent material from escaping from the trailer or railcar onto the facility property:

(A) A solid sliding cover on the top of the truck or railcar that is kept completely closed, or;

(B) For trucks, a slot-top type cover that reduces the uncovered open surface area by at least 50% and extends above the trailer top edges without gaps; and either the material contained in the trailer is moist material, or a chemical stabilizer is applied to the surface of the material in sufficient amounts and concentration so as to prevent fugitive dust emissions during transport; or,

(C) A continuous tarp that completely covers the trailer or railcar top, and for trucks, does not contact the material within the trailer. In addition, the tarp shall be installed or the trailer/railcar constructed to prevent wind from entering over the leading edge of the trailer/railcar rim into the interior of the trailer/railcar; or

(D) For railcars, an alternative method of control proven effective in preventing visible fugitive PM emissions escaping from the railcar and approved by the Executive Officer prior to its use.

(13) Facility operators shall not load material into truck trailers or railcars such that a trailer or railcar leaks liquid that contains material onto the facility property.

(14) If a truck trailer or railcar leaks liquid that contains material onto the facility property, the facility operator shall clean the affected property within one hour with a street sweeper or water.

(15) The facility operator shall clean all out-going material transport trucks, whether loaded or empty, so that:

(A) Any part of any tractor, trailer or tire exterior surface, excluding the inside of the trailers, are free of all loose material in excess of 1 gram per square decimeter or 10 grams total.

(B) The material removed by the truck cleaning operation is collected and recycled or otherwise disposed of so that it does not result in fugitive dust emissions.

(16) The facility operator shall not load sulfur into trucks or railcars unless:

(A) The sulfur is not greater than 1% crushed prilled sulfur by weight and;

(B) The loading is controlled by an enclosure or water spray system, approved by the Executive Officer, that reduces visible emissions to ensure compliance with paragraph (d)(1).

(e) Any facility that stores material solely for use at the facility either as a fuel or as an ingredient in a manufacturing process shall comply with all of the following requirements:

(1) The facility operator shall not cause, or allow the discharge into the atmosphere of, fugitive dust for a period or periods aggregating more than three minutes in any one hour which is equal to or greater than 10% opacity (equivalent to 10% opacity under EPA Method 9 or one half of No. 1 on the Ringelmann Chart, as published by the United States Bureau of Mines).

(2) The facility operator shall maintain all piles in enclosed storage, except as provided in paragraph (3). Any openings shall have overlapping flaps, sliding doors or other equivalent devices(s) approved by the Executive Officer, which shall remain closed except to allow the vehicles to enter or leave.

(3) For facilities existing before June 11, 1999 only, for coal and prilled sulfur, the facility operator may achieve compliance with outdoor storage provided the Executive Officer approves, in advance, an open storage pile control plan, or complies at all times with at least one of the following:

(A) Installs and maintains a three-sided barrier equal to the height of the material, with no more than fifty percent porosity to provide wind sheltering;

(B) Maintains and operates water spray bars, a misting system, water hoses and or water trucks to control fugitive dust emissions;

(C) Applies chemical stabilizer(s) to control fugitive dust emissions;

(D) Installs temporary covers; or

(E) Other equivalent measures approved by the Executive Officer.

(4) Within four hours after material is delivered to the facility by truck trailer, the facility operator shall inspect and clean up any spilled material on any paved road inside or outside the facility up to a quarter mile.

(5) The facility operator shall use a street sweeper to clean any paved road used for material transport, inside or outside the facility, up to a quarter mile from the material delivery site at least once a week or after every 100 truck material deliveries, whichever results in the most frequent street sweeping.

(6) The facility operator shall pave and maintain as paved, except for railroad tracks, the following areas:

(A) All non-road ground surfaces within the facility where material accumulation occurs; and,

(B) All roads and vehicle movement areas within the facility that are used to receive material by truck trailer.

(7) The facility operator shall pave or chemically stabilize and maintain all roads and vehicle movement areas within the facility, that are used for transporting coal.

(8) The facility operator shall prevent, or remove within four hours, any coke accumulations on all paved ground surfaces except for those areas subject to paragraph (3), unless the accumulations are either:

(A) Moist material; or

(B) Dry material not higher than three inches; or

(C) Completely covered.

(9) The facility operator shall prevent, or remove within four hours, any coal deposit higher than three inches on all paved ground surfaces except for those areas subject to paragraph (7), unless the accumulations are either:

(A) Moist material; or

(B) Completely covered.

(10) The facility operator of an AQMD permitted facility shall not allow any truck trailer or railcar, while on the AQMD permitted facility, to transport material unless the trailer or railcar is covered in one of the following manners, sufficient to prevent material from escaping from the truck/railcar onto the facility property.

(A) A solid sliding cover on the top of the truck or railcar that is kept completely closed, or;

(B) For trucks, a slot-top type cover that reduces the uncovered open surface area by at least 50% and extends above the trailer top edges without gaps; and either the material contained in the trailer is moist material, or a chemical stabilizer is applied to the surface of the material in sufficient amounts and concentration so as to prevent fugitive dust emissions during transport: or

(C) A continuous tarp that completely covers the trailer or railcar top, and for trucks, does not contact the material within the trailer. In addition, the tarp shall be installed or the trailer/railcar constructed to prevent wind from entering over the leading edge of the trailer/railcar rim into the interior of the trailer/railcar.

(D) For railcars, an alternative method of control proven effective in preventing visible fugitive PM emissions escaping from the railcar and approved by the Executive Officer prior to its use.

(11) When transport is by truck trailer, the facility operator shall not receive or transfer material in truck trailers unless such truck trailers, that within one quarter mile of the perimeter of the facility, drive only on paved roads.

(12) The facility operator shall:

(A) Record daily, any material delivery by truck trailer and any related street sweeping;

(B) Record the application of chemical stabilizer pursuant to paragraph (e)(7);

(C) Record the time of discovery, condition (moist or dry and or depth of material) and removal of any accumulations pursuant to paragraphs (e)(4), (e)(8) or (e)(9).

(f) Open Storage Pile Control Plan

The Executive Officer shall disapprove an Open Storage Pile Control Plan unless the facility operator demonstrates that the plan requires the facility operator to implement best available control measures on the pile(s) and provides that no material accumulates beyond the boundaries of the pile and provides that the facility will comply with all applicable AQMD rules. The Plan shall be submitted as a Rule 1158 Open Pile Control Plan in a complete and approvable form and by the compliance deadline. On and after July 11, 2008, the Executive Officer shall not accept any new Open Storage Control Plan for approval.

(1) In evaluating the proposed plan, the Executive Officer may reasonably require tests and sampling as necessary to determine the likelihood of emission reductions and compliance.

(2) The plan shall be implemented by the facility operator upon approval by the Executive Officer.

(3) The plan shall contain as a minimum:

(A) A contour map showing the location of the facility, the location of all piles, the perimeter boundary of the piles, and the surrounding land use and types of roadways within one quarter mile of the perimeter of the facility.

(B) The maximum daily amount of each material stored within the facility and the maximum daily throughput.

(C) A list of each applicable best available control measure for each fugitive dust source associated with the pile, including sources associated with moving the pile with mechanical equipment, and detailed documentation demonstrating how implementation of each measure will achieve compliance with all applicable AQMD rules under all conditions, including high wind conditions.

(4) In approving a plan, the Executive Officer may require any reasonable conditions deemed necessary to ensure the operation complies with the plan and AQMD Rules. The conditions may include, but shall not be limited to, application frequency and location of water spray systems, frequency of chemical stabilizer treatments, limits on handling, storage and transport of crushed materials, the placement, construction or modification of permanent perimeter boundaries for each pile or group of piles, monitoring wind conditions, advance notification to the Executive Officer of ship loading activities, and performing ambient air monitoring.

(5) In approving a plan, the Executive Officer may require any records deemed necessary to be maintained by the facility operator to demonstrate compliance with the plan. Such records shall be retained for at least 2 years and be made available to the Executive Officer upon request.

(6) The Plan is only valid for one year. If the Executive Officer denies approval, the facility will have 120 days to submit the necessary applications and two years from the date of the initial denial, to comply with the enclosed storage requirement. In the interim between before the storage pile(s) are enclosed, the Executive Officer may issue an interim plan that requires control measures deemed reasonably necessary to ensure the operation complies with all applicable AQMD Rules.

(7) Compliance with the provisions of the approved plan does not exempt a person from complying with the requirements of the California Health and Safety Code, or any other AQMD Rule.

(g) Compliance Schedule

(1) All existing Rule 1158 Interim or Permanent Compliance Plans are void.

(h) Test Method

(1) ASTM Methods D-3302, D-4931, or equivalent methods approved by the Executive Officer, the California Air Resources Board and the U.S. EPA. shall be used to determine the material moisture content.

(2) Appendix C.1, Procedures for Sampling Surface/Bulk Dust Loading, and Appendix C.2, Procedures for Laboratory Analysis of Surface/Bulk Dust Loading Samples, as contained in Compilation of Air Pollutant Emission Factors (AP-42), as published by the U.S. EPA, or equivalent methods as approved by

the Executive Officer, the California Air Resources Board and the U.S. EPA, shall be used to determine the silt loading value.

(3) A method approved as accurate by the Executive Officer shall be used to determine the weight of truck exterior surface material and material silt deposits.

(i) Compliance Determination and Performance Information

(1) For facilities subject to sub-division (d), each calendar quarter, if the facility operator selects the silt loading standard for that calendar quarter, and for all other operators once every calendar year, the facility operator shall perform the following tests pursuant to paragraphs (d)(7) and subdivision (h). Records of tests shall be maintained for a period of two years and shall be made available to District personnel upon request. Results of the test shall be submitted to the Executive Officer within 45 days after completion of each test. For facility operators testing once each calendar year, the test results shall be for information only, not for compliance determination. Silt loading tests shall be performed on the following roads or surfaces:

(A) On one paved road outside the facility, used by trucks transporting material, within one quarter mile of the exit of the facility; and

(B) On one road between the truck wash or truck cleaning area and the facility exit;

(2) For facilities subject to subdivision (d), each calendar quarter the facility operator shall conduct a test to show compliance with paragraph (d)(15) by sampling truck-trailer exterior surface material on one out-going material transport truck.

(j) Recordkeeping Requirements

The facility operator shall maintain all records at the facility for a period of two years and make them available to AQMD staff upon request.

(k) Exemptions

(1) The provisions of paragraph (d)(9) shall not apply to:

(A) Material feed conveyor(s) existing prior to June 11, 1999 which are interrupted by the conveyor shuttle, traveler or tripper, provided that the entire length of the feed conveyor(s) is equipped with permanent wind screens.

(B) Underground conveyors. This exemption shall only apply to those sections of the conveyors which are underground.

(C) Conveyors located inside enclosed storage. This exemption shall not apply to those sections of the conveyor which are outside of the enclosed storage.

(D) That portion of an existing conveyor belt that contains the tensioner.

(2) The provisions of paragraph (d)(12) shall not apply to prilled sulfur when the freeboard is, in no place, less than 3 feet.

(3) The provisions of this rule shall not apply to the storage, handling, and transport of molten sulfur.

(4) The provisions of paragraph (d)(2) shall not apply to the deposit of coke in separation ponds or that has a moisture content of at least 12% in coker pits, slurry bins, and coke dewatering truck loading bins.

(5) The provisions of paragraph (d)(7) and (e)(5) shall not apply to the specific section of road where public vehicle through-traffic is denied access due to a construction project or road repair.

(6) The provisions of paragraph (d)(11) shall not apply to existing shiploaders permitted prior to June 11, 1999, for loading coal onto ships with a beam length greater than 105 feet whenever all of the following are met:

(A) The facility operator shall maintain a log of the date, time, loading rate, ship capacity, and duration of each use of the headbox by-pass;

(B) A maximum of ten ships with a beam length greater than 105 feet per calendar year are loaded under this exemption and the facility operator demonstrates to the Executive Officer's satisfaction that only the offshore side of the vessel is loaded without the required control equipment;

(C) The shiploader shuttle boom is not long enough to allow discharge through the telescoping spout to reach the far side of that ship's hatch without using the headbox by-pass;

(D) The facility operator notifies the AQMD 48 hours before shiploading is scheduled to commence; and,

(E) The shiploader is not reconstructed or replaced after June 11, 1999.

(7) The provisions of paragraph (d)(2) shall not apply to the following, provided the material or coke is removed within 48 hours and a permanent record is made and the District is notified within the first 24 hours of the incident:

(A) Material taken off a conveyor because it is refused by a ship, or material that is associated with the abatement of a hot coke (greater than 120 degrees Fahrenheit) incident; or,

(B) Coke, up to 700 tons, that is incompletely processed from a refinery coker.

(8) The provisions of paragraph (d)(2) shall not apply to moist material or material associated with a "hot coke" incident being actively transported in a front-end loader.

(9) The provisions of paragraphs (d)(2) and (e)(10) shall not apply to coal inside railcars that originated from outside California, provided the coal is moistened upon arrival at a District permitted facility so as to prevent fugitive emissions pursuant to paragraph (d)(1).

(10) Provisions of paragraph (d)(2) shall not apply to facilities performing routine maintenance/repair of replacing component parts on/in enclosed storage structures, such as roofing and siding material, providing the following conditions are met:

(A) the facility notifies the District, in writing or electronically, at least 10 working days prior to any maintenance/repair activity, of the intent to perform the maintenance/repair and the dates for the activity;

(B) the surface area of components being replaced does not exceed 2% of the total structure surface area;

(C) the duration for maintenance/repair shall not exceed 14 days;

(D) during the maintenance/repair, no materials shall be actively moved or disturbed in the structure;

(E) no visible emission shall be observed; and

(F) any water spray system or air pollution control equipment associated with the structure will be in use as needed to prevent visible emissions during the maintenance/repair operation.

(11) The provisions of paragraph (d)(2) shall not apply to deposits of material in permanent water recycling system dewatering beds, existing prior to July 11, 2008, provided that:

(A) they are totally enclosed by wind fences, stand alone structures, with a maximum porosity of 20%, to reduce windblown dust escaping from the beds and tall enough to provide at least three feet of visible freeboard from the top of the material at all times, to provide wind sheltering, no later than November 11, 2008; and

(B) the surface stabilization is maintained at a moisture content of not less than 12%, at all points, including during material removal; and

(C) no visible emissions shall be observed and shall be visually monitored for, and observations recorded, daily.

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

(Adopted December 6, 1985)

RULE 1159. NITRIC ACID UNITS - OXIDES OF NITROGEN

(a) Definitions

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

1. Nitric Acid Production Unit means any facility producing weak nitric acid by either the pressure or atmospheric pressure process.
2. Weak Nitric Acid means acid which is 30 to 70 percent in strength.

(b) Requirements

An owner/operator of a nitric acid production unit shall not discharge into the atmosphere any gases which contain oxides of nitrogen expressed as NO_2 in excess of:

1. 450 ppm, dry basis, averaged over 15 consecutive minutes.
2. 237 ppm, dry basis, averaged over 60 consecutive minutes, or
3. 1.5 kilograms per metric ton (3 pounds per ton) of acid produced, averaged over a 60-consecutive-minute period (the production being expressed as 100 percent nitric acid).

(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)(Amended November 17, 2000)(Amended November 9, 2001)
(Amended July 11, 2003)(Amended July 9, 2004)(Amended July 8, 2005)

RULE 1162 POLYESTER RESIN OPERATIONS

(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, building panels, air pollution control equipment, sewage treatment equipment, storage tanks, transportation parts, automotive, aircraft, and aerospace components, and other industrial and consumer products.

(b) Definitions

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

(1) 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.

(2) CLOSED MOLDING SYSTEM is a method of fabricating composite parts by placing composite materials in a confining mold cavity and applying pressure and/or heat.

(3) CORROSION-RESISTANT MATERIALS are polyester resin materials used to make products for corrosion resistant applications such as tooling, fuel or chemical tanks, boat hulls, pools and outdoor spas.

(4) ELECTROSTATIC APPLICATION is charging of atomized coating droplets for deposition to a grounded substrate by electrostatic attraction.

(5) EXEMPT COMPOUND is as defined in Rule 102.

(6) FIBER REINFORCEMENT MATERIALS are multifilament of glass or other fibrous materials such as, carbon, boron, metal and amid polymers, which are used to reinforce plastic.

(7) FIBER REINFORCED PLASTIC OR COMPOSITE (FRP/C) MATERIALS is a mixture of polyester resin and fiber reinforcement materials.

(8) FILLER is a finely divided inert (non-VOC) material, which may be added to the resin to enhance its mechanical properties and extend its

volume. Resin fillers include, but are not limited to, silica, carbon black, talc, mica and calcium carbonate.

(9) FILLED POLYESTER RESIN MATERIAL is a material formulated by adding compatible filler(s) to polyester resin material(s).

(10) FIRE RETARDANT MATERIALS are polyester resin materials used to make products that are resistant to flame or fire.

(11) FLOWCOATER is a nonatomizing application technique of applying resins and gel coats to an open mold with a fluid nozzle in a fan pattern with no air supplied to the nozzle.

(12) GEL COAT is a thermosetting polyester resin surface coating, either pigmented or clear, that provides a cosmetic enhancement and improves resistance to degradation from exposure to the elements.

(13) GENERAL PURPOSE POLYESTER RESINS are resin materials that are not corrosion resistant, fire retardant, high strength, or gel coats.

(14) HAND LAY-UP is a hand application technique of composite materials using a bucket and a paint brush or a paint roller, or other hand held method of application.

(15) HIGH-VOLUME, LOW-PRESSURE (HVLP) SPRAY is a coating application system which is operated at air pressures between 0.1 and 10 pounds per square inch gauge (psig) measured dynamically at the center of the air cap and at the air horns.

(16) 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.

(17) LAMINATION RESINS are orthophthalate, isophthalate and dicyclopentadiene (DCPD) resins which are used in composite system made of layers of reinforcement fibers and resins, such as in boat fabrication.

(18) MARBLE OR CULTURED RESINS are orthophthalate and modified acrylic isophthalate resins, which are designed for the fabrication of cast products, such as vanities.

(19) MONOMER is a volatile organic compound that partially combines with itself, or other similar compounds, by a cross-linking reaction to become a part of the cured resin. Monomers include, but are not limited to, styrene and methyl methacrylate.

(20) MONOMER PERCENT BY WEIGHT OF A RESIN is the weight of the monomer, divided by the weight of the polymer.

(21) MONOMER PERCENT BY WEIGHT OF A FILLED RESIN AS APPLIED is the weight of the monomer, divided by the weight of the polymer and filler(s).

(22) NONATOMIZING SPRAY APPLICATION is any application technique in which resin flows from the applicator, in a steady and observable coherent flow, without droplets, for a minimum distance of three (3) inches from the applicator orifices.

(23) OPEN MOLDING SYSTEM is a method of fabricating composite parts by applying gel coats, resins, fibers, and other composite materials on an open mold using either hand lay-up or spray-up applications.

(24) PIN STRIPING is a spray application technique used to apply one or more narrow bands, marks, or streaks of gel coat onto the surface of an open mold of a composite product.

(25) POLYESTER is a polymer of ester molecules, which are formulated by the reaction of an acid and an alcohol and linked together by the ester linkages.

(26) POLYESTER RESIN MATERIALS are 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.

(27) 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 polyester resin materials.

(28) POLYMER is a chemical compound, such as polystyrene, comprised of a large number of chemical units (monomer) composed of identical cross-linking groups, such as styrene.

(29) PRESSURE-FED ROLLER is a fabric roller that is fed with continuous supply of catalyzed resins from a mechanical fluid pump.

(30) PRIMER GEL COAT is gel coat which is used to coat the surface of composite parts, prior to top-coat painting, for automotive, aerospace, marine and home building industries.

(31) 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.

(32) 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.

(33) RESIN is any thermosetting polyester resin, which is used to encapsulate and bind together reinforcement fibers and/or fillers in the formulation of composite materials.

(34) RESIN IMPREGNATOR is a mechanical nonatomizing composite materials application technique in which fiber reinforcement is saturated with resins in a controlled ratio for each specific composite product.

(35) SOLID SURFACE RESINS are resins, which are used without gel coats to fabricate homogenous solid surface products.

(36) SPECIALITY GEL COATS are gel coats which are used in conjunction with fire retardant, corrosion resistant or high-strength materials.

(37) THERMOSET POLYESTER RESIN is a resin material that undergoes a chemical reaction during curing and can not be reshaped.

(38) TOUCH-UP is that portion of the process that is necessary to cover minor imperfections.

(39) TUB/SHOWER RESINS are dicyclopentadiene (DCPD) resins, along with orthophthalate and isophthalate resins, which are used to fabricate bathware products.

(40) VAPOR SUPPRESSANT is a wax substance added to resin for the purpose of forming a layer on the surface of the resin while it is curing and minimize the outward diffusion of monomer vapor into the atmosphere.

(41) VAPOR SUPPRESSED RESIN (VSR) is a polyester resin material which contains additives to reduce VOC evaporation loss to less than fifty (50) grams per square meter of surface area as determined and certified by resin manufacturers.

(42) VOLATILE ORGANIC COMPOUND (VOC) is as defined in Rule 102.

(c) Requirements

(1) Application Techniques

(A) Except for gel coats, effective July 1, 2002, a person shall not apply any resin materials to an open mold surface unless one of the

following nonatomizing application techniques is used and operated according to the operating procedure specified by the equipment manufacturer:

(i) Nonatomizing Spray Application Technique, as defined in paragraph (b)(22);

(ii) Flowcoaters;

(iii) Pressure-Fed Rollers;

(iv) Resin Impregnators;

(v) Hand Lay-up Applications; or

(vi) Other nonatomizing application techniques which are approved in writing by the Executive Officer, CARB, and U.S. EPA, as having similar emission reduction efficiencies.

(B) Effective July 1, 2005, an operator shall not apply gel coat materials to an open molding surface unless one of the following application techniques is used and operated according to the operating procedure specified by the equipment manufacturer:

(i) Any nonatomizing application technique listed under subparagraph (c)(1)(A);

(ii) Air-Assisted Airless Spray;

(iii) Electrostatic Attraction; or

(iv) High-Volume, Low-Pressure (HVLP)

(2) Material Requirements

(A) A person shall not use polyester resin material in an open molding system, which has a monomer content in excess of the limits specified in the following Table.

Polyester Resin Materials	Monomer Percentage by Weight as Applied	
	Prior to 11-09-2001	Current Limits
Clear Gel Coat	50	-
For Marble Resins	-	40
For Other Resins	-	44
Pigmented Gel Coat	45	-
White and Off White	-	30
Non-White	-	37
Primer	-	28
Specialty Gel Coats	-	48
General Purpose Resin	35	-
Marble Resins	-	10 or (32 % as supplied, no fillers)
Solid Surface Resins	-	17
Tub/Shower Resins	-	24 or
Lamination Resins	-	(35 % as supplied, no fillers) 31 or (35 % as supplied, no fillers)
Others	-	35
Fire Retardant Resin	42	38
Corrosion Resistant Resin	48	48
High Strength Resin	48	40

(B) Composite operations that are also subject to Rule 1132 and have elected to comply under the alternative compliance option specified in paragraph (d)(1) of Rule 1132, shall comply with the July 1, 2002, monomer content requirements of subparagraph (c)(2)(A) on January 1, 2002.

(C) Effective July 1, 2002, a person shall not apply to an open molding system any tub/shower polyester resin material unless all the applied resin material is vapor suppressed.

(3) Process Requirements

(A) A person shall not operate a closed molding system, unless the weight loss of polyester resin materials during polymerization is less than four (4) percent.

(B) Until July 1, 2002, in lieu of using resins that comply with the monomer content requirements of subparagraph (c)(2)(A), a person may use a vapor suppressed resin, provided the weight loss from VOC emissions does not exceed fifty (50) gram per square meter of exposed surface area during resin polymerization.

(C) A person shall not perform a pultrusion operation, unless wet-out baths are covered except for 18 inches from the exit of the bath to the die. The weight loss of polyester resin materials during polymerization shall be less than three (3) percent in a pultrusion operation.

(4) Notwithstanding the requirements specified in paragraph (c)(1), a person may perform touch-up and repair using a hand-held spray gun which has a container for gel coat or resin as part of the gun.

(5) Any person processing polyester resin materials and any other VOC-containing materials shall keep these materials in closed containers except when filling or emptying the container.

(6) Solvent cleaning of application equipment, parts, products, tools, machinery, equipment, general working areas, and the storage and disposal of VOC-containing materials used in cleaning operations shall comply with Rule 1171 - Solvent Cleaning Operations.

(d) Control Equipment

In lieu of complying with the requirements of subdivision (c), a person may install and operate an emission control system which has an overall capture and control efficiency of 90 percent or more on a mass basis, as approved by the Executive Officer.

(e) Recordkeeping Requirements

(1) A person subject to the provisions of this rule shall maintain daily records. Alternatively, records may be kept on a monthly basis provided the polyester resin process or equipment is not subject to a daily production limit or daily VOC limit in any applicable District rule(s) or permit(s). 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 type of the nonatomizing, or other in the case of gel coat, application technique(s) used, manufacturer's name, and the records of the fluid tip pressure calibration as specified by the manufacturer;

(B) The manufacturer's name, the type and amount of each of the polyester resin materials used; and the weight (in percent) of monomer for all polyester resin materials and filler(s). If VOC-containing materials are added to the polyester resin, the amount of VOC-containing materials, in grams, and the VOC content in grams per liter, of VOC-containing materials;

(C) Certification of Analysis from the resin manufacture(s) to verify that all the applied tub/shower resin materials are vapor suppressed; and

(D) For closed-mold and pultrusion systems, the weight loss (in percent) of polyester resins 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.

(f) Test Methods and Procedures

The following test methods and procedures shall be used to determine compliance with this rule. Other applicable test methods may be used if they are determined to be equivalent and approved in writing by the Executive Officer, the California Air Resources Board and the U.S. Environmental Protection Agency.

(1) Determination of VOC Content of VOC- Containing Materials

(A) U.S. EPA Method 24 - Determination of Volatile Matter Content, Water Content, Density Volume Solids, and Weight Solids of Surface Coating.

(B) District Methods 302 and 303–Determination of Exempt Compounds.

(C) District Method 304-Determination of Volatile Organic Compounds (VOCs) in Various Materials, or any other applicable

method approved by the US Environmental Protection Agency, California Air Resources Board, and the SCAQMD.

(D) District Method 309 – Determination of the Weight Loss of Polyester Resin Materials.

(E) District Method 312 – Determination of the monomer content of Polyester Resin Materials.

(F) District Method 313 – Determination of Volatile Organic Compounds by Gas Chromatography/Mass Spectrometry.

(2) Determination of Efficiency of Emission Control System

(A) The capture efficiency of an emission control system shall be determined by verifying the use of a Permanent Total Enclosure (PTE) and 100% capture efficiency as defined by U.S. EPA Method 204 "Criteria for and Verification of a Permanent or Temporary Total Enclosure." Alternatively, if a U.S. EPA Method 204 defined PTE is not employed, capture efficiency shall be determined using a minimum of three sampling runs subject to data quality criteria presented in U.S. EPA technical guidance document "Guidelines for Determination Capture Efficiency, January 9, 1995." Individual capture efficiency test runs subject to the U.S. EPA technical guidelines shall be determined by:

(i) The Temporary Total Enclosure (TTE) approach of U.S. EPA Method 204 through 204F; or

(ii) The District "Protocol for Determination of Volatile organic Compounds (VOCs) Capture efficiency."

(B) 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 U.S. EPA's Test Method 18, or Air Resources Board (ARB) Method 422 for the determination of emissions of Exempt Compounds and U.S. EPA's Test Methods 25, 25A, District Method 25.1 for the determination of Total Gaseous Non-Methane Organic Emissions as Carbon, or District Method 25.3 for the determination of Low Concentration Non-Methane Non-Ethane Organic Compound Emissions from Clean Fueled Combustion Sources, as applicable.

(C) The overall efficiency of an emission control system shall be determined using the following equation:

Overall Efficiency

= (Capture Efficiency) x (Control Equipment Efficiency)/100

(g) Alternative Compliance Option

A person may use alternative application processes and materials to those listed in paragraphs (c)(1) and (c)(2) provided they result in equivalent VOC emissions and are approved in writing by the Executive Officer, CARB and U.S. EPA.

(h) Exemption

The requirement of subparagraph (c)(1)(B) shall not apply to pin striping provided that the total amount of gel coat materials sprayed does not exceed one (1) gallon per day per facility.

SOUTH COAST AIR QUALITY MANAGMENT DISTRICT

(Adopted July 8, 1988)(Amended May 5, 1989)(Amended March 2, 1990)
(Amended December 7, 1990)(Amended January 13, 1995)

RULE 1164. SEMICONDUCTOR MANUFACTURING

(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:

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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°C, in mm Hg
       VPi = Vapor pressure of the "i"th VOC compound at 20°C, in mm Hg
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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°C (68°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°C (68°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.

SOUTH COAST AIR QUALITY MANAGEMENT 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. (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 April 7, 1989)(Amended March 2, 1990)(Amended Feb. 1, 1991)
(Amended July 19, 1991)(Amended August 2, 1991)
(Amended December 4, 1992)(Amended December 10, 1993)
(Amended April 11, 1997)(Amended February 13, 1998)(Amended September 15, 2000)
(Amended June 7, 2002)(Amended July 12, 2002)(Amended October 3, 2003)
(Amended January 7, 2005)

RULE 1168. ADHESIVE AND SEALANT APPLICATIONS

(a) Purpose and Applicability

The purpose of this rule is to reduce emissions of volatile organic compounds (VOCs) and to eliminate emissions of chloroform, ethylene dichloride, methylene chloride, perchloroethylene, and trichloroethylene from the application of adhesives, adhesive bonding primers, adhesive primers, sealants, sealant primers, or any other primers. This rule applies to all commercial and industrial sales and applications of adhesives, adhesive bonding primers, 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) ACRYLIC is a thermoplastic polymer or copolymer of acrylic acid, methacrylic acid, esters of these acids, or acrylonitrile.

(2) ACRYLONITRILE-BUTADIENE-STYRENE (ABS) plastic is made by reacting monomers of acrylonitrile, butadiene, and styrene and is normally identified with an ABS marking.

(3) ADHESIVE is 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.

(4) ADHESIVE BONDING PRIMER is an adhesive applied to a surface to improve the bond of subsequent adhesives and sometimes to inhibit corrosion.

(5) ADHESIVE PRIMER is a coating applied to a substrate, prior to the application of an adhesive, to provide a bonding surface.

(6) ADHESIVE PRIMER FOR PLASTIC is a material applied to a plastic substrate before applying an adhesive in order to obtain better adhesion.

(7) ADHESIVE PROMOTER is a coating applied to a substrate in a monomolecular thickness to promote wetting and form a chemical bond with the subsequently applied material.

(8) ADHESIVE SOLID is the nonvolatile portion of an adhesive that remains after heating a sample of the material at 110°C for one hour.

(9) AEROSOL ADHESIVE means any adhesive packaged as an aerosol product in which the spray mechanism is permanently housed in a nonrefillable 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 the California Air Resources Board consumer products regulation found in Title 17 of the California Code of Regulations, beginning at Section 94507.

(10) AEROSOL SPRAY CAN is 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.

(11) AEROSPACE COMPONENT is 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.

(12) AIRCRAFT means 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.

(13) AIRCRAFT TIRE REPAIR is 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.

(14) ARCHITECTURAL APPLICATION is the use of an adhesive, sealant, or adhesive 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 is 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) CARPET PAD ADHESIVE is an adhesive used for the installation of a carpet pad (or cushion) beneath a carpet.

(17) CERAMIC TILE ADHESIVE is an adhesive used for the installation of ceramic tile products.

(18) CERAMIC TILES are a ceramic surfacing unit made from clay or a mixture of clay and other materials.

(19) CHLORINATED POLYVINYL CHLORIDE (CPVC) plastic is a polymer of the chlorinated polyvinyl monomer that contains 67% chlorine and is normally identified with a CPVC marking.

(20) COATING SOLID is the nonvolatile portion of a coating that remains after heating a sample of the material at 110oC for one hour.

(21) COMPUTER DISKETTE MANUFACTURING is the process where the fold-over flaps are glued to the body of a vinyl jacket.

(22) CONTACT ADHESIVE is an adhesive applied to two separate surfaces, allowed to dry, and brought together for adhesion and bonding with subsequent pressure.

(23) COVE BASE ADHESIVE is 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.

(24) CYANOACRYLATE ADHESIVE is a single-component reactive diluent adhesive that contains at least 85 percent by weight ethyl, methyl, methoxymethyl or other functional groupings of cyanoacrylate.

(25) DRY WALL ADHESIVE is an adhesive used during the installation of gypsum dry wall to studs or solid surfaces.

(26) EXEMPT COMPOUNDS are as defined in Rule 102.

(27) FACILITY means 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.

(28) FIBERGLASS is fine filaments of glass.

(29) FOAM is a rigid or spongy cellular mass with gas bubbles dispersed throughout.

(30) GLUE is a hard gelatin obtained from hides, tendons, cartilage, bones, or other parts of animals.

(31) GRAMS OF VOC PER LITER OF ADHESIVE OR SEALANT, LESS WATER AND LESS EXEMPT COMPOUNDS is the weight of VOC per combined volume of VOC and adhesive or sealant solids, and can be calculated by the following equation:

Grams of VOC per Liter of Adhesive or Sealant, 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 any adhesive or sealant, except a low solids adhesive or sealant shall be calculated by the following equation:

Grams of VOC per Liter of Adhesive or Sealant, Less Water and Less Exempt Compounds =

$$\frac{W_{rs} - W_{rw} - W_{res}}{V_{rm} - V_{rw} - V_{res}}$$

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_m = 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

(32) GRAMS OF VOC PER LITER OF MATERIAL is the weight of VOC per volume of material, to be used for a low-solids adhesive or sealant, 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

(33) HAND APPLICATION METHODS is 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.

(34) HIGH-VOLUME, LOW-PRESSURE (HVLP) SPRAY is equipment 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.

(35) INDOOR CARPET ADHESIVE is 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.

(36) LIGHT CURABLE ADHESIVES and SEALANTS are single-component reactive adhesives and sealants that cure upon exposure to visible-light, ultra-violet light or to an electron beam.

(37) LOW-SOLIDS ADHESIVE is an adhesive which has less than one pound of solids per gallon of material (or 120 grams of solids per liter of material).

(38) LOW-SOLIDS ADHESIVE PRIMER is an adhesive primer which has less than one pound of solids per gallon of material (or 120 grams of solids per liter of material).

(39) MARINE DECK SEALANT is any sealant to be applied to wooden marine decks.

(40) MARINE DECK SEALANT PRIMER is any sealant primer to be applied to wooden marine decks.

(41) MODIFIED BITUMINOUS PRIMER consist 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.

(42) MODIFIED BITUMINOUS MATERIALS are materials obtained from natural deposit 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.

(43) MULTIPURPOSE CONSTRUCTION ADHESIVE is 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.

(44) NONMEMBRANE ROOF ADHESIVE is any adhesive to be used for the installation or repair of nonmembrane roofs. This category includes plastic or asphalt roof cement, asphalt roof coatings, and cold application cement.

(45) NONMEMBRANE ROOF SEALANT is 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.

(46) ORTHOTICS AND PROSTHETICS are 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.

(47) OUTDOOR CARPET ADHESIVE is an adhesive used during the installation of carpet that is not in an enclosure and is exposed to ambient weather conditions during normal use.

(48) PANEL ADHESIVE is an adhesive used for the installation of plywood, pre-decorated hardboard (or tileboard), fiberglass reinforced plastic, and similar pre-decorated or non-decorated panels to studs or solid surfaces.

(49) PERCENT VOC BY WEIGHT is 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:

$$\%\ \text{VOC weight} = \frac{W_v}{W} \times 100$$

Where: W_v = weight of the VOCs, in grams

W = weight of material, in grams

(50) PERSON is 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.

(51) PLASTIC CEMENT WELDING is 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.

(52) PLASTIC FOAM is a foam constructed of plastics.

(53) PLASTICS are 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.

(54) POLYCARBONATE is a thermoplastic resin derived from bisphenol A and phosgene, a linear polyester of carbonic acid, dihydroxy compound and any carbonate diester, or by ester interchange.

(55) POLYETHYLENE TEREPHALATE is a thermoplastic polyester formed from ethylene glycol by direct esterification or by catalyzed ester exchange between ethylene glycol and dimethyl terephalate.

(56) POLYETHYLENE TEREPHALATE GLYCOL (PETG) is a glycol modified polyethylene terephalate.

(57) POLYURETHANE FOAMS are plastic foams, as defined in "Whittington's Dictionary of Plastics," page 329, and may be either rigid or flexible.

(58) POLYVINYL CHLORIDE (PVC) plastic is a polymer of the chlorinated vinyl monomer that contains 57 percent chlorine.

(59) POROUS MATERIAL is a substance which has tiny openings, often microscopic, in which fluids may be absorbed or discharged. Such materials include, but are not limited to, wood, fabric, paper, corrugated paperboard, and plastic foam.

(60) PRIMER is a material applied to a substrate to improve adhesion of subsequently applied adhesive.

(61) PROPELLANT is a fluid under pressure which expels the contents of a container when a valve is opened.

(62) REACTIVE DILUENT is 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.

(63) ROADWAY SEALANT is any sealant to be applied to public streets, highways, and other surfaces, including but not limited to curbs, berms, driveways, and parking lots.

(64) ROLL COATER is 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.

(65) RUBBER FLOORING ADHESIVE is an adhesive that is used for 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.

(66) RUBBER FOAM is a foam constructed of natural or synthetic rubber.

(67) SEALANT is any material with adhesive properties that is formulated primarily to fill, seal, or waterproof gaps or joints between two surfaces. Sealants include sealant primers and caulks.

(68) SEALANT PRIMER is any product applied to a substrate, prior to the application of a sealant, to enhance the bonding surface.

(69) SHOE REPAIR, LUGGAGE AND HANDBAG ADHESIVE is an adhesive used to repair worn, torn or otherwise damaged uppers, soles, and heels of shoes, or for making repairs to luggage and handbags.

(70) SHEET-APPLIED RUBBER LINING OPERATION is 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.

(71) SINGLE-PLY ROOF MEMBRANE ADHESIVE is 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.

(72) SINGLE-PLY ROOF MEMBRANE SEALANT is 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.

(73) SOLVENT WELDING is the softening of the surfaces of two substrates by wetting them with solvents and/or adhesives, and joining them together through a chemical and/or physical reaction(s) to form a fused union.

(74) SPACE VEHICLE is a vehicle designed to travel beyond Earth's atmosphere.

(75) SPECIAL PURPOSE CONTACT ADHESIVE is 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.

Deleted: to any porous or nonporous surface.

(76) STRUCTURAL GLAZING ADHESIVE is any adhesive to be used to adhere glass, ceramic, metal, stone, or composite panels to exterior building frames.

(77) STRUCTURAL WOOD MEMBER ADHESIVE is an adhesive used for the construction of any load bearing joints in wooden joists, trusses, or beams.

(78) SUBFLOOR ADHESIVE is an adhesive used for the installation of subflooring material over floor joists.

(79) THIN METAL LAMINATING is 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.

(80) TIRE REPAIR is 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.

(81) TIRE RETREAD ADHESIVE is any adhesive to be applied to the back of precured 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.

(82) TOP AND TRIM ADHESIVE is 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.

(83) TRAFFIC MARKING TAPE is preformed reflective to be applied to public streets, highways, and other surfaces, including but not limited to curbs, berms, driveways, and parking lots.

(84) TRAFFIC MARKING TAPE ADHESIVE PRIMER is any adhesive primer to be applied to surfaces prior to installation of traffic marking tape.

(85) 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.

(86) VCT means vinyl composition tile and is a material made from thermoplastic resins, fillers and pigments.

(87) VISCOSITY is the internal friction of a liquid that makes it resistant to flow.

(88) VOLATILE ORGANIC COMPOUND (VOC) is as defined in Rule 102 - Definition of Terms.

(89) WOOD FLOORING ADHESIVE is an adhesive used to install a wood floor surface, which may be in the form of parquet tiles, wood planks, or strip-wood.

(90) WOOD PARQUET FLOORING is 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.

(91) WOOD PLANK FLOORING is solid or laminated wood in plank form.

(c) Requirements

(1) Unless otherwise specified in paragraph (c)(2), a person shall not apply any adhesives, adhesive bonding primers, adhesive primers, or any other primer, which have a VOC content in excess of 250 g/L less water and less exempt compounds.

(2) A person shall not apply adhesives, adhesive bonding primers, adhesive primers, sealants, sealant primers, or any other primer, which have a VOC content in excess of the limits specified below:

VOC Limit*, Less Water and Less Exempt Compounds in Grams per Liter

Architectural Applications	Current VOC Limit
Indoor Carpet Adhesives	50
Carpet Pad Adhesives	50
Outdoor Carpet Adhesives	150
Wood Flooring Adhesive	100
Rubber Floor Adhesives	60
Subfloor Adhesives	50
Ceramic Tile Adhesives	65
VCT and Asphalt Tile Adhesives	50
Dry Wall and Panel Adhesives	50

Architectural Applications	Current VOC Limit
Cove Base Adhesives	50
Multipurpose Construction Adhesives	70
Structural Glazing Adhesives	100
Single Ply Roof Membrane Adhesives	250

Specialty Applications	VOC Limits and Effective Dates**			
	Current VOC Limit	1-1-05	7-1-05	1-1-07
PVC Welding	510			
CPVC Welding	490			
ABS Welding	400		325	
Plastic Cement Welding	350	250		
Adhesive Primer for Plastic	650		550	
Computer Diskette Manufacturing	350			
Contact Adhesive	80			
Special Purpose Contact Adhesive	250			
Tire Retread	100			
Adhesive Primer for Traffic Marking Tape	150			
Structural Wood Member Adhesive	140			
Sheet Applied Rubber Lining Operations	850			
Top and Trim Adhesive	540			250

** The specified limits remain in effect unless revised limits are listed in subsequent columns.

For adhesives, adhesive bonding primers, or any other primer not regulated by the above two tables and applied to the following substrates, the following limits shall apply:

Substrate Specific Applications	Current VOC Limit
Metal to Metal	30
Plastic Foams	50
Porous Material (except wood)	50
Wood	30
Fiberglass	80

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If an adhesive is used to bond dissimilar substrates together the adhesive with the highest VOC content shall be allowed.

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Sealants	Current VOC Limit
Architectural	250
Marine Deck	760
Nonmembrane Roof	300
Roadway	250
Single-Ply Roof Membrane	450
Other	420

Sealant Primers	Current VOC Limit
Architectural	
Non Porous	250
Porous	775
Modified Bituminous	500
Marine Deck	760
Other	750

* For low-solid adhesives or sealants the VOC limit is expressed in grams per liter of material as determined in paragraph (b)(32); for all other adhesives and sealants, VOC limits are expressed as grams of VOC per liter of adhesive or sealant less water and less exempt compounds as determined in paragraph (b)(31).

(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 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 Executive Officer. Application of adhesives or sealants shall be accomplished only by the use of one of the following methods:

(A) Electrostatic application; 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 adhesive or sealant application methods as are demonstrated to the Executive Officer to be capable of achieving at least 65 percent transfer efficiency and for which prior written approval of the Executive Officer has been obtained; or

(H) For adhesives and sealants with a viscosity of 200 centipoise or greater, as applied, airless spray, air-assisted airless, and air-atomized spray may also be used.

(6) A person may comply with the provisions of paragraphs (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 at least 80 percent overall, by weight.

(7) A person may comply with the provisions of paragraph (c)(1) and paragraph (c)(2) by means of an Alternative Emission Control Plan pursuant to Rule 108.

(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 another source specific rule application, for which there is a lower VOC standard, then 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 subdivision (i), records shall be maintained pursuant to Rule 109.

(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, Code of Federal Regulations Title 40, 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 the South Coast Air Quality Management District's (SCAQMD) "Laboratory Methods of Analysis for Enforcement Samples" or ASTM Method D4457-85.

(3) The VOC content of PVC, CPVC, and ABS pipe cements, adhesive primer for plastic shall be determined by Method 316A in the South Coast Air Quality Management District's (SCAQMD) "Laboratory Methods of Analysis for Enforcement Samples."

(4) The VOC content of cyanoacrylate adhesives shall be determined by Method 316B in the South Coast Air Quality Management District's (SCAQMD) " Laboratory Methods of Analysis for Enforcement Samples."

(f) Test Methods

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(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, SCAQMD's Method 25.1, or SCAQMD Test 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 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.

(g) Prohibition of Specifications

(1) A person shall not solicit or require any other person to use, in the District, any adhesives or sealants or combination of adhesives or sealants in violation of the requirements of this rule.

(2) The requirements of this paragraph 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 1, 2001, except as provided in subdivision (j), paragraphs (c)(6) and (c)(7), 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 paragraphs (c)(1) and (c)(2).

(2) On and after January 1, 2004, 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, and trichloroethylene.

(3) The prohibition of sales and use as specified in paragraphs (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 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 Rule 1168;

(C) Adhesives and Sealants that contain less than one percent by weight of methylene chloride; or

(D) Solvent welding formulations containing methylene chloride used to bond hard acrylic, polycarbonate, and polyethylene terephalate glycol plastic fabrications, provided:

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(i) The concentration of methylene chloride in any solvent welding formulation does not exceed 60 percent by weight; and

(ii) The purchase of all solvents welding products does not exceed 20 gallons per calendar year at a single facility, as demonstrated by purchase records and invoices of methylene chloride containing solvent welding formulations. Such records shall be made available to the Executive Officer or his representative upon request.

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(i) Rule 442 Applicability

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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 provisions of Rule 442.

(j) Exemptions

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(1) The provisions of paragraph (c)(1) and paragraph (c)(2) shall not apply to the following:

(A) Adhesives used in tire repair; or

(B) Adhesives and/or adhesive application processes in compliance with Rules 1104, 1106, 1128, 1130 and 1130.1.

(2) The provisions of this rule shall not apply to aerospace components that are subject to Rule 1124.

(3) The provisions of paragraph (c)(5) and subdivision (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, less water and less exempt compounds.

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(4) The provisions of this rule shall not apply to any facility that uses less than one pint of total adhesives and sealants in any one day so long as the products were purchased prior to September 15, 2000.

(5) The provisions of subdivision (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 and sealants are used, and the type of application(s); and

(ii) The amount of adhesives and sealants used and the VOC content of such adhesives and sealants; and

(iii) The amount of solvents used and VOC content of such solvents; and

(iv) The manufacturer/suppliers identification and type of material; and

(B) Such records shall be retained in accordance with the provisions of subdivision (e) of this rule.

(6) The provisions of paragraph (c)(1) and paragraph (c)(2) shall not apply to a facility that demonstrates that the total volume of non-compliant adhesives, adhesive primers, adhesive bonding primers, sealants, and sealant primers is less than 55 gallons per facility per rolling 12-month period. On and after September 1, 2001, a facility may not use this paragraph 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 this rule, except paragraph (h)(2), shall not apply to adhesives used to glue flowers to parade floats.

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(8) The provisions of subdivision (c) shall not apply to solvent welding operations used in the manufacturing of medical devices.

(9) The provisions of this rule shall not apply to aerosol adhesives and primers dispensed from aerosol spray cans.

(10) The provisions of paragraph (c)(1) and paragraph (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 gallons per day or less of these adhesives.

(11) The provisions of this rule, except paragraph (h)(2) and subdivision (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.

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(12) The provisions of this rule, except paragraph (h)(2), shall not apply to the use of cyanoacrylate adhesives.

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(13) The provisions of this rule shall not apply to adhesives and sealants subject to the California Air Resources Board consumer products regulation found in Title 17 of the California Code of Regulations, beginning at Section 94507.

(14) Until October 1, 2003, the provisions of paragraph (c)(1) and paragraph (c)(2) shall not apply to solvent welding of flexible ductwork, at which

time the VOC limit shall be 250 grams per liter, less water and less exempt compounds.

(15) A person may sell or apply a non-complying VOC-containing or methylene chloride-containing product for one year after the applicable effective date in paragraph (c)(2) for VOC-containing adhesives and sealants, and for one year after the applicable effective date of paragraph (h)(2) or subparagraph (h)(3)(D) for methylene chloride-containing adhesives and sealants, provided:

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(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.

(16) The provisions of this rule, except paragraph (h)(2), shall not apply to adhesives used to fabricate orthotics and prosthetics under a medical doctor's prescription.

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(17) The provisions of this rule, except paragraph (h)(2), shall not apply to shoe repair, luggage and handbag adhesives.

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(Adopted August 2, 1991)(Amended May 12, 1995)(Amended September 13, 1996)
(Amended June 13, 1997)(Amended October 8, 1999)(Amended August 2, 2002)
(Amended November 7, 2003)(Amended May 6, 2005)(Amended July 14, 2006)
(Amended February 1, 2008)

RULE 1171. SOLVENT CLEANING OPERATIONS

(a) Purpose and Applicability

The purpose of this rule is to reduce emissions of volatile organic compounds (VOCs), toxic air contaminants, and stratospheric ozone-depleting or global-warming compounds from the use, storage and disposal of solvent cleaning materials in solvent cleaning operations and activities. A solvent cleaning operation is solvent cleaning conducted as part of a business. This rule applies to: all persons who use these solvent materials in solvent cleaning operations during the production, repair, maintenance, or servicing of parts, products, tools, machinery, equipment, or general work areas; all persons who store and dispose of these materials used in solvent cleaning operations; and all solvent suppliers who supply, sell, or offer for sale solvent cleaning materials for use in solvent cleaning operations.

(b) Definitions

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

(1) AEROSOL PRODUCT is a hand-held, non-refillable container which expels pressurized product by means of a propellant-induced force.

(2) APPLICATION EQUIPMENT is a device used to apply adhesive, coating, ink, or polyester resin materials.

(3) APPLICATION LINE is that portion of a motor vehicle assembly production line which applies surface and other coatings to motor vehicle bodies, hoods, fenders, cargo boxes, doors, and grill opening panels.

(4) ARCHITECTURAL COATING is any coating applied to stationary structures and their appurtenances, to mobile homes, to pavements, or to curbs.

(5) BLANKET is a synthetic rubber mat used in offset-lithography to transfer or “offset” an image from a planographic printing plate to the paper or other substrate.

(6) BLANKET WASH is a solvent used to remove ink from the blanket of a press.

(7) CLEAN AIR SOLVENT is as defined in Rule 102.

(8) CLEAN AIR SOLVENT CERTIFICATE is a certificate issued by the District to a manufacturer, distributor, or person for a specific product or class of products that meets the criteria for a Clean Air Solvent.

(9) CURED COATING, CURED INK, OR CURED ADHESIVE is a coating, ink, or adhesive, which is dry to the touch.

(10) ELECTRICAL APPARATUS COMPONENTS is an internal component such as wires, windings, stators, rotors, magnets, contacts, relays, energizers, and connections in an apparatus that generates or transmits electrical energy including, but not limited to: alternators, generators, transformers, electric motors, cables, and circuit breakers, except for the actual cabinet in which the components are housed. Electrical components of graphic arts application equipment and hot-line tools are also included in this category.

(11) ELECTRON BEAM INK is an ink that dries by chemical reaction caused by high energy electrons.

(12) ELECTRONIC COMPONENT is that portion 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.

(13) EXEMPT COMPOUND is as defined in Rule 102.

(14) FACILITY means 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.

(15) FLEXOGRAPHIC PRINTING is the method in which the image area is raised relative to the non-image area and utilizes flexible rubber or other elastomeric plate and rapid drying liquid inks.

(16) FULL SERVICE SOLVENT PROVIDER is any person that provides both solvents and services to a solvent cleaning operation. Such services may include, but are not limited to, one or more of the following: filling or refilling solvent cleaning equipment with solvent, collection or pick up of customer's solvent-related waste stream, or cleaning equipment sales or rental.

(17) GENERAL WORK SURFACE is an area of a medical device or pharmaceutical facility where solvent cleaning is performed on work surfaces including, but not limited to, tables, countertops, and laboratory

benches. General work surface shall not include items defined under janitorial cleaning.

(18) 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:	Ws	=	Weight of volatile compounds in gram s
	Ww	=	Weight of water in grams
	Wes	=	Weight of exempt compounds in grams
	Vm	=	Volume of material in liters

(19) GRAPHIC ARTS are all gravure, letterpress, flexographic, and lithographic printing processes.

(20) GRAVURE PRINTING is 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.

(21) HIGH PRECISION OPTIC is an optical element used in an electro-optical device and is designed to sense, detect, or transmit light energy, including specific wavelengths of light energy and changes in light energy levels.

(22) HOT-LINE TOOL is a specialized tool used primarily on the transmission systems, sub-transmission systems and distribution systems for replacing and repairing circuit components or for other types of work with electrically energized circuits.

(23) INKJET PRINTING is a printing process in which images are formed by the precise placement of small (picoliter-sized) droplets of ink fired at high speeds from the nozzle(s) of computer-controlled printheads.

(24) JANITORIAL CLEANING is the cleaning of building or facility components including, but not limited to, floors, ceilings, walls, windows, doors, stairs, bathrooms, furnishings, and exterior surfaces of office equipment, and excludes the cleaning of work areas where manufacturing or repair activity is performed.

(25) LETTERPRESS PRINTING is the method in which the image area is raised relative to the non-image area and the ink is transferred to the paper directly from the image surface.

(26) LIQUID LEAK is the visible liquid solvent leak from the container at a rate of more than three (3) drops per minute, or a visible liquid mist.

(27) LIQUID-TIGHT FOOD CONTAINER is a paperboard container that can hold liquid food and food products without leaking even when it is held upside-down.

(28) LITHOGRAPHIC PRINTING is a plane-o-graphic method in which the image and non-image areas are on the same plane.

(29) MAINTENANCE CLEANING is a solvent cleaning operation or activity carried out to keep clean general work areas where manufacturing or repair activity is performed, to clean tools, machinery, molds, forms, jigs, and equipment. This definition does not include the cleaning of coatings, adhesives, or ink application equipment.

(30) MANUFACTURING PROCESS is the process of making goods or articles by hand or by machinery.

(31) MEDICAL DEVICE is 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.

(32) NEWSPRINT is uncoated paper used mainly for printing newspapers, flyers, and other printed materials intended for mass distribution.

(33) NON-ABSORBENT CONTAINER is a container made of nonporous material, which does not allow the migration of the liquid solvent through it.

(34) NON-ATOMIZED SOLVENT FLOW is 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.

(35) NON-LEAKING CONTAINER is a container without liquid leak.

(36) ON-PRESS COMPONENT is a part, component, or accessory of a press that is cleaned while still being physically attached to the press.

(37) ON-PRESS SCREEN CLEANING is a solvent cleaning activity carried out during press runs in screen printing operation to remove excess inks and contaminants from a screen that is still attached to the press.

(38) PACKAGING PRINTING is any lithographic, flexographic, gravure, or letterpress printing that results in identifying or beautifying paper, paperboard, or cardboard products to be used as containers, enclosures, wrappings, or boxes.

(39) 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.

(40) PHARMACEUTICAL PRODUCT is a preparation or compound of medicinal drugs including, but not limited to, a prescription drug, analgesic, decongestant, antihistamine, cough suppressant, vitamin, mineral and herb, and is used by humans for consumption to enhance personal health.

(41) PHOTOCURABLE RESIN is a chemical material that solidifies upon exposure to light.

(42) PRINTING, in the graphic arts, is any operation that imparts color, design, alphabet, or numerals on a substrate.

(43) RADIATION-EFFECT COATING is a material that prevents radar detection.

(44) REMOTE RESERVOIR CLEANER is 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.

(45) REMOVABLE PRESS COMPONENT is a part, component, or accessory of a press that is physically attached to the press but is disassembled and removed from the press prior to being cleaned. Rollers, blankets, metering rollers, dampening rollers, ink trays, printing plates, fountains, impression cylinders and plates shall not be considered as removable press components.

(46) REPAIR CLEANING is a solvent cleaning operation or activity carried out during a repair process.

(47) REPAIR PROCESS is the process of returning a damaged object or an object not operating properly to good condition.

(48) ROLLER WASH is a solvent used to remove ink from the rollers of a press.

(49) SCIENTIFIC INSTRUMENT is an instrument (including the components, assemblies, and subassemblies used in their manufacture) and associated accessories and reagents that is used for the detection, measurement, analysis, separation, synthesis, or sequencing of various compounds.

(50) SCREEN PRINTING is 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.

(51) SCREEN RECLAMATION is a solvent cleaning activity carried out in screen printing operation where the screen is completely cleaned for recycling or reuse of the screen for other production runs.

(52) SOLVENT is a VOC-containing liquid used to perform solvent cleaning.

(53) SOLVENT CLEANING is 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.

(54) SOLVENT FLUSHING is 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.

(55) SOLVENT SUPPLIER is any person who sells and delivers or arranges to deliver solvent cleaning materials to a solvent cleaning operation subject to this regulation.

(55) STEREOLITHOGRAPHY is a type of printing process that employs a system using a light to solidify photocurable resins in a desired configuration in order to produce a 3-dimensional object.

(57) SPECIALTY FLEXOGRAPHIC PRINTING is flexographic printing on polyethylene or polypropylene food packaging, fertilizer bags, or liquid-tight food containers.

(58) STERILIZATION INDICATING INK is an ink that changes color to indicate that sterilization has occurred. Such ink is used to monitor the sterilization of medical instruments, autoclave efficiency, and the thermal processing of foods for prevention of spoilage.

(59) STRIPPING is the removal of cured coatings, cured inks, or cured adhesives.

(60) SURFACE PREPARATION is the removal of contaminants such as dust, soil, oil, grease, etc., prior to coating, adhesive, or ink applications.

(61) ULTRAVIOLET INK is an ink that dries by polymerization reaction induced by ultraviolet energy.

(62) VOLATILE ORGANIC COMPOUND (VOC) is as defined in Rule 102.

(63) WIPE CLEANING is 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 person shall not use a solvent to perform solvent cleaning operations unless the solvent complies with the applicable requirements set forth below:

SOLVENT CLEANING ACTIVITY	CURRENT LIMITS* VOC g/l (lb/gal)	EFFECTIVE 1/1/2008* VOC g/l (lb/gal)	EFFECTIVE 1/1/2009 VOC g/l (lb/gal)
(A) Product Cleaning During Manufacturing Process Or Surface Preparation For Coating, Adhesive, Or Ink Application			
(i) General	25 (0.21)		
(ii) Electrical Apparatus Components & Electronic Components	100 (0.83)		
(iii) Medical Devices & Pharmaceuticals	800 (6.7)		
(B) Repair and Maintenance Cleaning			
(i) General	25 (0.21)		
(ii) Electrical Apparatus Components & Electronic Components	100 (0.83)		
(iii) Medical Devices & Pharmaceuticals			
(A) Tools, Equipment, & Machinery	800 (6.7)		
(B) General Work Surfaces	600 (5.0)		

SOLVENT CLEANING ACTIVITY (cont.)	CURRENT LIMITS* VOC g/l (lb/gal)	EFFECTIVE 1/1/2008* VOC g/l (lb/gal)	EFFECTIVE 1/1/2009 VOC g/l (lb/gal)
(C) Cleaning of Coatings or Adhesives Application Equipment	25 (0.21)		
(D) Cleaning of Ink Application Equipment			
(i) General	25 (0.21)		
(ii) Flexographic Printing	25 (0.21)		
(iii) Gravure Printing			
(A) Publication	100 (0.83)		
(B) Packaging	25 (0.21)		
(iv) Lithographic (Offset) or Letter Press Printing			
(A) Roller Wash, Blanket Wash, & On-Press Components			
(I) Newsprint	100 (0.83)		
(II) Other Substrates	500 (4.2)	100 (0.83)	
(B) Removable Press Components	25 (0.21)		
(v) Screen Printing	500 (4.2)	100 (0.83)	
(vi) Ultraviolet Ink/ Electron Beam Ink Application Equipment (except screen printing)	650 (5.4)	650 (5.4)	100 (0.83)
(vii) Specialty Flexographic Printing	100 (0.83)		
(E) Cleaning of Polyester Resin Application Equipment	25 (0.21)		

* The specified limits remain in effect unless revised limits are listed in subsequent columns.

(2) Cleaning Devices and Methods Requirements

A person shall not perform solvent cleaning unless one of the following cleaning devices or methods is used:

(A) Wipe cleaning;

(B) Closed containers or hand held spray bottles from which solvents are applied without a propellant-induced force;

(C) 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 non-operation with the exception of maintenance and repair to the cleaning equipment itself;

(D) Cleaning device which is listed in the Office of Operations' manual "Alternative Devices for Rule 1171 Compliance" dated July 1, 1991. The Executive Officer shall periodically update the manual to identify any additional cleaning devices determined by the Executive Officer to result in equivalent or lower emissions;

(E) Remote reservoir cleaner used pursuant to the provisions of paragraph (c)(3);

(F) 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

(G) 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

Any person owning or operating a remote reservoir cleaner shall comply with all of the following requirements in addition to the applicable VOC limits specified in paragraph (c)(1):

(A) 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;

(B) Direct solvent flow in a manner that will prevent liquid solvent from splashing outside of the remote reservoir cleaner;

(C) Do not clean porous or absorbent materials, such as cloth, leather, wood, or rope; and

(D) 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

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

In lieu of complying with the requirements in paragraphs (c)(1) or (c)(2), a person may comply by using a VOC emission collection and control system in association with the solvent cleaning operation provided:

(A) the emission control system shall collect at least 90 percent, by weight, of the emissions generated by the solvent cleaning operation and

(i) have a destruction efficiency of at least 95 percent, by weight, or

(ii) have an output of less than 50 parts per million (PPM) calculated as carbon with no dilution; or

(B) 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

Records shall be maintained pursuant to Rule 109 for all applications subject to this rule, including those exempted under paragraphs (g)(3) through (g)(11), except facilities required to keep records of VOC used pursuant to any other Regulation XI rules.

(7) Effective September 1, 2008, any solvent supplier supplying solvent cleaning material for use by a solvent cleaning operation in the District, shall upon request by the Executive Officer, provide in a District-approved electronic format, the following information: product name of the supplied

solvent cleaning material; the name and address of the solvent cleaning operation that the product was supplied to; dates and quantities in which the product was supplied during the time period specified by the Executive Officer; and the VOC content of the product as supplied. The solvent supplier shall maintain records necessary to provide this required information for three (3) years.

(8) Effective September 1, 2008, the operator shall maintain at all times, and make available to the Executive officer upon request, the correct written dilution instructions for each solvent cleaning material if dilution is necessary to meet the applicable VOC limits in this rule. A solvent supplier providing solvent cleaning material for use by a solvent cleaning operation in the District shall supply to the operator, upon the operator's request, the correct written dilution instructions for each supplied solvent cleaning material.

(9) Any person who sells or offers for sale solvent cleaning materials for use in the District shall comply with the provisions of Rule 443.1 – Labeling of Materials Containing Organic Solvents.

(d) General Prohibitions

(1) A person shall not atomize any solvent unless it is vented to an air pollution control equipment, which meets the requirements of paragraph (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) A person shall not perform solvent cleaning activities or operations subject to the provisions of this rule with any material which contains Group II exempt compounds listed in Rule 102 except cyclic, branched, or linear, completely methylated siloxanes (VMS).

(4) Any person subject to the Airborne Toxic Control Measure for Emissions of Chlorinated Toxic Air Contaminants from Automotive Maintenance and Repair Activities - Title 17, California Code of Regulations, section 93111, shall comply with its provisions.

(5) No full service solvent provider shall aid, abet or assist a solvent cleaning operation to use a supplied solvent in a non-compliant manner.

(e) Test Methods

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 United States Environmental Protection Agency, and approved in writing by the District Executive Officer may also be used.

(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 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,

(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 subdivision (c), only when manufacturers specify which individual compounds are used in the solvent formulation and 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 Presence of VOC in Cleaning Materials

The presence of VOC in the headspace over the cleaning material shall be determined by SCAQMD Method 313 [Determination of Presence of Volatile Organic Compounds (VOC) in a Headspace] contained in the SCAQMD "Laboratory Methods of Analysis for Enforcement Samples" manual.

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.

(3) Determination of Efficiency of Emission Control System

(A) The capture efficiency of an emission control system as specified in subparagraph (c)(5)(A) shall be determined by verifying the use of a Permanent Total Enclosure (PTE) and 100% capture efficiency as defined by USEPA Method 204, “Criteria for and Verification of a Permanent or Temporary Total Enclosure.” Alternatively, if a USEPA Method 204 defined PTE is not employed, capture efficiency shall be determined using a minimum of three sampling runs subject to data quality criteria presented in the USEPA technical guidance document “Guidelines for Determining Capture Efficiency, January 9, 1995.” Individual capture efficiency test runs subject to the USEPA technical guidelines shall be determined by:

(i) The Temporary Total Enclosure (TTE) approach of USEPA Methods 204 through 204F, June 4, 1997; or

(ii) The District “Protocol for Determination of Volatile Organic Compounds (VOC) Capture Efficiency,” May 1995.

(B) The control equipment efficiency of an emission control system as specified in subparagraph (c)(5)(A), on a mass emissions basis, and the VOC concentrations in the exhaust gases, measured and calculated as carbon, shall be determined by USEPA 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. 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 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.

(5) 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 paragraph (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 provisions of this rule, except (c)(1), Solvent Requirements, shall not apply to cleaning operations using a solvent containing no more than 25 grams of VOC per liter of material, provided that, if the Executive Officer determines that a person has violated any provision of paragraph (c)(1), Solvent Requirements, then for a period of three years following such violation, paragraph (c)(6), Recordkeeping Requirements, shall apply to the facility at which the violation occurred.

(2) 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, vapor degreasers, conveyorized degreasers, or motion picture film cleaning equipment.

(B) Cleaning operations subject to Rule 1102 – Petroleum Solvent Dry Cleaners, and Rule 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 cleaning, including graffiti removal.

(G) Stripping of cured coatings, cured ink, or cured adhesives.

(3) Provisions of paragraph (c)(1) shall not apply to the following applications:

(A) Cleaning of solar cells, laser hardware, scientific instruments, and high-precision optics.

(B) Cleaning conducted with: performance laboratory tests on coatings, adhesives, or inks; research and development programs; and laboratory tests in quality assurance laboratories.

(C) Cleaning of motor vehicles on application lines subject to Rule 1115 - Motor Vehicle Assembly Line Coating Operations.

(D) Cleaning of paper-based gaskets, and clutch assemblies where rubber is bonded to metal by means of an adhesive.

(E) Cleaning of cotton swabs to remove cottonseed oil before cleaning of high-precision optics.

(F) Medical device and pharmaceutical facilities using up to 1.5 gallons per day of solvents.

(G) Until December 31, 2008, the cleaning of photocurable resins from stereolithography equipment and models.

(H) Until January 1, 2009, the cleaning of ultraviolet or electron beam lamps and reflectors used for the curing of ultraviolet or electron beam ink or coatings.

(I) Cleaning of adhesive application equipment used for thin metal laminating operations provided the clean-up solvent used contains no more than 950 grams of VOC per liter.

(J) Cleaning of electronic or electrical cables provided the clean-up solvent used contains no more than 400 grams of VOC per liter.

(K) Touch up cleaning performed on printed circuit boards where surface mounted devices have already been attached provided that

the solvent used contains no more than 800 grams of VOC per liter.

(4) Cleaning with aerosol products shall not be subject to the provisions of paragraph (c)(1) and paragraph (d)(1) if 160 fluid ounces or less of non-compliant aerosol products are used per day, per facility. The use of such product shall comply with CARB regulations.

(5) The provisions of subparagraph (c)(1)(C) shall not apply to the following applications:

(A) 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.

(B) Cleaning of application equipment used to apply coatings on satellites and radiation effect coatings.

(C) The cleaning of application equipment used to apply solvent-borne fluoropolymer coatings until December 31, 2008, provided the clean-up solvent used for such cleaning contains no more than 900 grams of VOC per liter.

(6) The provisions of subparagraph (c)(1)(D) shall not apply to persons or facilities using less than 1.5 gallons per day of solvents to clean sterilization indicating ink application equipment.

(7) Until December 31, 2007, the provisions of subparagraph (c)(1)(D) shall not apply to the cleaning of metering rollers, dampening rollers and printing plates, provided the clean-up solvent used for such cleaning contains no more than 800 grams of VOC per liter.

(8) Until December 31, 2007, the provisions of (c)(1)(D)(iv)(A)(II) shall not apply to automatic roller and blanket cleaning systems, provided the solvent used for such cleaning contains no more than 650 grams of VOC per liter.

(9) Until January 1, 2009, the provisions of (c)(1)(D)(v) shall not apply to on-press cleaning of screens and automatic cleaning equipment used in screen reclamation provided the clean up solvent used for such cleaning activities contains no more than 500 grams of VOC per liter.

(10) Until January 1, 2009, the provisions of (c)(1)(D)(vi) shall not apply to the cleaning of metering rollers, dampening rollers and printing plates in

UV/EB ink application equipment, provided the clean-up solvent used for such cleaning contains no more than 800 grams of VOC per liter.

(11) Provisions of paragraph (d)(1) shall not apply to the following:

(A) Cleaning of the nozzle tips of automated spray equipment systems, except for robotic systems.

(B) Cleaning with spray bottles or containers described in subparagraph (c)(2)(B).

(C) Printing operations where the roller or blanket wash is applied automatically.

(12) The provisions of this rule shall not apply to cleaning operations in printing pre-press or graphic arts pre-press areas, including the cleaning of film processors, color scanners, plate processors, film cleaning, and plate cleaning.

(Adopted July 7, 1989)(Amended December 7, 1990)(Amended May 13, 1994)
(Amended December 6, 2002)(Amended June 1, 2007)(Amended February 6, 2009)

RULE 1173 CONTROL OF VOLATILE ORGANIC COMPOUND LEAKS AND RELEASES FROM COMPONENTS AT PETROLEUM FACILITIES AND CHEMICAL PLANTS

(a) Purpose

This rule is intended to control volatile organic compound (VOC) leaks from components and releases from atmospheric process pressure relief devices (PRDs).

(b) Applicability

This rule applies to components at refineries, chemical plants, lubricating oil and grease re-refiners, marine terminals, oil and gas production fields, natural gas processing plants and pipeline transfer stations.

(c) Definitions:

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

(1) BACKGROUND is the ambient concentration of total organic compounds (TOC) in the air at least one (1) meter upwind of the component to be inspected, determined according to the test method in paragraph (j)(1).

(2) CHEMICAL PLANT is any facility engaged in producing chemicals, and/or manufacturing products by chemical processes. Any facility or operation that has 282 as the first three digits in its Standard Industrial Classification Code as defined in the Standard Industrial Classification Manual is included in this definition.

(3) COMMERCIAL NATURAL GAS is a mixture of hydrocarbons, with at least 80 percent methane by volume and less than 10 percent by weight VOC, determined according to test methods specified in paragraph (j)(2).

(4) COMPONENT is any valve, fitting, pump, compressor, pressure relief device, diaphragm, hatch, sight-glass, and meter in VOC service. They are further classified as:

(A) MAJOR COMPONENT is 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 is any component which is not a major component.

(5) COMPRESSOR is 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) FACILITY is a refinery, chemical plant, lubricating oil and grease re-refiner, marine terminal, oil and gas production field, natural gas processing plant, or pipeline transfer station.

(7) FIELD GAS means feed stock gas entering the natural gas processing plant.

(8) FITTING is a device used to attach or connect pipes or piping details, including but not limited to flanges and threaded connections.

(9) HATCH is any covered opening system that provides access to a tank, container or vessel.

(10) HEAVY LIQUID is any liquid with 10 percent or less VOC by volume evaporated at 150°C (302°F), determined according to test methods specified in paragraph (j)(2) or (j)(3).

(11) INACCESSIBLE COMPONENT is 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.

(12) INSPECTION is a survey of components, using an appropriate analyzer, according to the test method in paragraph (j)(1), for the purpose of determining compliance with this rule, and may be either of the following:

(A) OPERATOR INSPECTION is a survey of components by the operator or their contractor.

(B) DISTRICT INSPECTION is a survey of components by District personnel or their representatives.

(13) LEAK is the dripping of either heavy or light liquid; or the detection of a concentration of TOC above background, determined according to the test method in paragraph (j)(1).

(14) LIGHT LIQUID is any liquid with more than 10 percent VOC by volume evaporated at 150°C (302°F), determined according to the test method specified in subparagraph (j)(2).

(15) LUBRICATING OIL AND GREASE RE-REFINER is a facility engaged in the blending, compounding, and re-refining of lubricating oils and greases from purchased mineral, animal, and vegetable materials, as defined in Standard Industrial Classification Code 2992. Petroleum refineries engaged in the production of lubricating oils and greases are classified in Standard Industrial Classification Code 2911 and therefore are not included in this definition.

(16) MARINE TERMINAL is a facility, equipment or structure constructed to handle the loading or unloading of organic liquid into or out of marine tank vessels, defined as in Standard Industrial Classification Codes 4226 and 5171.

(17) NATURAL GAS PROCESSING PLANT is a facility engaged in the separation of natural gas liquids from field gas and/or fractionation of the liquids into natural gas products, such as ethane, propane, butane, and natural gasoline. Excluded from the definition are compressor stations, dehydration units, sweetening units, field treatment, underground storage facilities, liquefied natural gas units, and field gas gathering systems unless these facilities are located at a natural gas processing plant.

(18) OIL AND GAS PRODUCTION FIELD is a facility on which crude petroleum and natural gas production and handling are conducted, as defined in the Standard Industrial Classification Manual as Industry No. 1311, Crude Petroleum and Natural Gas.

(19) PIPELINE TRANSFER STATION is a facility which handles the transfer and storage of petroleum products or crude petroleum in pipelines.

(20) PLATFORM is any raised, permanent, horizontal surface for the purpose of gaining access to components.

(21) PRESSURE RELIEF DEVICE (PRD) is a pressure relief valve or a rupture disc.

(22) PRESSURE RELIEF VALVE (PRV) is a device which is automatically actuated by upstream static pressure to the atmosphere (atmospheric PRV) or to a control device, and used for safety or emergency purposes.

(23) PROCESS PRD is a PRD located on process equipment other than storage tanks or pipelines used to transport material.

(24) PUMP is a device used to transport fluids by the addition of energy, and includes all associated components used for connecting or sealing purposes.

(25) REFINERY is a facility that processes petroleum, as defined in the Standard Industrial Classification Manual as Industry No. 2911, Petroleum Refining.

(26) RELEASE is any VOC emission to the atmosphere from an atmospheric PRD caused by an increase in upstream pressure. A leak caused by improper reseating of the PRD is not a release.

(27) REPAIR is corrective action for the purpose of eliminating or reducing leaks that may involve the temporary removal or taking out of service of a component or PRV.

(28) RUPTURE DISC is a diaphragm held between flanges for the purpose of isolating VOC from the atmosphere or from a downstream pressure relief valve.

(29) TAMPER-PROOF means that all the data collected shall be encrypted such that it cannot be modified.

(30) TELLTALE INDICATOR is a device installed in conjunction with a PRD, indicating whether a release has occurred.

(31) TOTAL ORGANIC COMPOUNDS (TOC) is the concentration of gaseous organic compounds determined according to the test method in paragraph (j)(1).

(32) TURNAROUND is a scheduled shutdown of a process unit for maintenance and repair work.

(33) VALVE is a device that regulates or isolates the fluid flow in a pipe, tube, or conduit by means of an external actuator.

(34) VOLATILE ORGANIC COMPOUND (VOC) is as defined in Rule 102.

(d) Leak Standards

(1) The operator of a facility subject to this rule shall be in violation of this rule if District inspection detects any:

(A) Light liquid leak of more than three drops per minute;

(B) Leak greater than 50,000 ppm from a component in light liquid/gas/vapor service;

(C) Leak greater than 500 ppm from a component in heavy liquid service; or

(D) Leak within any continuous 24-hour period and numbering in excess of the Leak Thresholds for that component listed below in Table 1, if it is:

(i) A leak from a component in light liquid /gas/vapor service, greater than 10,000 ppm; or

(ii) A leak from an atmospheric PRD, greater than 200 ppm; or

(iii) A leak from a pump in heavy liquid service, greater than 100 ppm.

TABLE 1. LEAK THRESHOLDS

Component Type	Max. No. of Leaks for 200 or less components inspected	Max No. of Leaks for > 200 components inspected
Valves	1	0.5% of number inspected
Pumps	2	1% of number inspected
Compressors	1	1
Atmospheric PRDs	1	1
Threaded Pipe Connectors	1	0.5% of number inspected
Other Components	1	1

The maximum number of leaks in Table 1 shall be rounded upwards to the nearest integer, where required.

(E) Open-ended lines and valves located at the end of lines that are not 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.

(2) For the purpose of determining an oil and gas production facility's compliance with the leak standards specified in subparagraphs (d)(1)(B), (d)(1)(C), and (d)(1)(D), the operator of the facility may request a written approval from the Executive Officer to adjust a leak measurement to exclude methane and ethane, provided:

(A) The operator submits a plan identifying the components to be included under paragraph (d)(2);

(B) The operator demonstrates the methane and ethane content of the line product is 50 percent or more by volume, as determined by a District approved laboratory, according to the test method in paragraph (j)(2);

(C) The demonstration is based on a sampling and analysis of a representative sample obtained on a semiannual basis in accordance with the schedule and sample size approved by the Executive Officer; and

(D) A copy of the analysis results with laboratory analysis is provided upon request by the Executive Officer.

(E) The operator of a Title V facility shall submit an application for permit modification to incorporate the approval under paragraph (d)(2) in the Title V permit.

(e) Identification Requirements

The operator shall:

(1) Physically identify clearly and visibly all major components in light liquid/gas/vapor service and pumps in heavy liquid service for inspection, repair, replacement, and recordkeeping purposes.

(2) Clearly identify all major components in heavy liquid service other than pumps subject to paragraph (e)(1), and minor components, in Piping and Instrumentation (P&I) flow diagrams, and/or group them together functionally for inspection, repair, replacement, and recordkeeping purposes.

(3) Submit the information required to identify components in heavy liquid service, as required by paragraphs (e)(1) and (e)(2), for approval by the Executive Officer on or before September 1, 2003.

(4) Any change(s) in major component identification shall require prior written approval from the Executive Officer.

(f) Operator Inspection Requirements

(1) The operator shall:

(A) Audio-visually inspect all accessible pumps, compressors, and atmospheric PRDs once during every eight-hour operating period, except for unmanned oil and gas production fields and unmanned pipeline transfer stations.

(B) Inspect all accessible components in light liquid/gas/vapor service and pumps in heavy liquid service quarterly, with pumps in heavy liquid service beginning July 1, 2003.

(C) Inspect all inaccessible components in light liquid/gas/vapor service annually.

(D) At any refinery with more than 25,000 components:

(i) At the time of operator inspection, simultaneously record in an electronic format all component inspections beginning January 1, 2004, and

(ii) Operate and maintain the electronic recording instrument according to manufacturer's specifications.

(E) Inspect an atmospheric PRD within one calendar day and reinspect it within 14 calendar days after every release.

(F) Inspect all repaired or replaced components within 30 days of the repair or replacement.

(2) The operator may apply for written approval from the Executive Officer to change the inspection frequency for each type of accessible component other than PRD in light liquid/gas/vapor service at a facility, except pumps and compressors, as required in subparagraph (f)(1)(B) from quarterly to annually, provided that all components at that facility have been successfully operated and maintained for five consecutive quarters with no liquid leaks of more than three drops per minute, and with leaks greater than 10,000 ppm not exceeding the Leak Thresholds, by component type, listed in Table 1.

(3) The operator may apply for written approval from the Executive Officer to change the inspection frequency for all accessible atmospheric PRDs in light liquid/gas/vapor at a facility, as required in subparagraph (f)(1)(B), from quarterly to annually, provided that all atmospheric PRDs at that facility have been successfully operated and maintained for five consecutive quarters with no liquid leaks of more than three drops per minute and with leaks greater than 200 ppm not exceeding the Leak Thresholds listed in Table 1.

(4) The operator may apply for written approval from the Executive Officer to change the inspection frequency for pumps in heavy liquid service at a facility, as required in subparagraph (f)(1)(B), from quarterly to annually, provided that all pumps in heavy liquid service at that facility have been successfully operated and maintained for five consecutive quarters, with leaks greater than 100 ppm not exceeding the Leak Thresholds listed in Table 1 for pumps.

(5) The operator shall submit documentation prior to the change in inspection frequency, as per paragraphs (f)(2), (f)(3) and (f)(4), for written approval from the Executive Officer.

(6) The operator shall revert to a quarterly inspection frequency for a component type, should the annual operator inspection or District inspection show any leaks in excess of the thresholds applicable to the component type listed below:

(A) Light liquid leak of more than three drops per minute, or

(B) Leaks exceeding the maximum number of leaks, by component type, listed in Table 1 for:

(i) Components in light liquid/gas/vapor service, greater than 10,000 ppm,

(ii) Pumps in heavy liquid service, greater than 100 ppm,

(iii) Atmospheric PRDs, greater than 200 ppm.

(g) Maintenance Requirements

The operator shall:

(1) Repair, replace or remove a leaking component as soon as practicable but no later than the time period specified in Table 2, Repair Periods. For each calendar quarter, the operator may extend the repair period, as specified in Table 2, for a total number of leaking components, not to exceed 0.05 percent of the number of components inspected during the previous quarter, by type, rounded upward to the nearest integer where required.

TABLE 2. REPAIR PERIODS

Type of Leak	Time Period	Extended Repair Period
Light liquid/gas/vapor component leaks greater than 500 ppm but no more than 10,000 ppm	7 Calendar Days	7 Calendar Days
Heavy liquid component leaks greater than 100 ppm but no more than 500 ppm	7 Calendar Days	7 Calendar Days
Heavy liquid leak greater than 3 drops per minute and greater than 100 ppm but no more than 500 ppm	7 Calendar Days	
Any leak greater than 10,000 ppm but no more than 25,000 ppm	2 Calendar Days	3 Calendar Days

Type of Leak	Time Period	Extended Repair Period
Atmospheric PRD leaks greater than 200 ppm but no more than 25,000 ppm	2 Calendar Days	3 Calendar Days
Any leak greater than 25,000 ppm	1 Calendar Day	
Heavy liquid component leaks greater than 500 ppm	1 Calendar Day	
Light liquid leaks greater than 3 drops per minute	1 Calendar Day	

(2) Replace a component or parts thereof with Best Available Control or Retrofit Technology (BACT or BARCT), or vent it to an air pollution control device approved by the Executive Officer, after it has been subjected to five repair actions within a continuous twelve month period for:

(A) A light liquid leak of greater than three drops per minute,

(B) A leak greater than 10,000 ppm or

(C) A leak greater than 200 ppm for an atmospheric PRD.

(3) The reporting provisions of Rule 430 shall not be applicable to components being repaired or replaced under the provisions of this rule, except compressors.

(h) Atmospheric Process PRD Requirements

(1) The operator of a refinery shall continuously monitor atmospheric PRDs located on process equipment by installing tamper-proof electronic valve monitoring devices capable of recording the duration of each release and quantifying the amount of the compounds released according to the following schedule:

(A) For a refinery with less than 50 atmospheric process PRDs:

(i) Install monitoring devices on 50 percent of all atmospheric process PRDs by January 1, 2009; and

(ii) Install monitoring devices on the remaining atmospheric process PRDs by July 1, 2009.

(B) For a refinery with more than 50 atmospheric process PRDs:

(i) Install monitoring devices on 20 percent of all atmospheric process PRDs by January 1, 2009,

(ii) Install monitoring devices on 40 percent of all atmospheric process PRDs by July 1, 2009; and

(iii) Install monitoring devices on the remaining atmospheric process PRDs by July 1, 2010.

(C) In conjunction with the requirements of subparagraphs (h)(1)(A) and (h)(1)(B), the operator of a refinery shall continue to monitor all atmospheric process PRDs by use of electronic process control instrumentation that allows for real time continuous parameter monitoring or telltale indicators until such time that the operator of a refinery has demonstrated compliance with subparagraphs (h)(1)(A) and (h)(1)(B).

(D) Notwithstanding the requirements of subparagraphs (h)(1)(A) and (h)(1)(B), the operator of a refinery may delay the installation of the tamper-proof electronic valve monitoring devices to no later than the next scheduled turnaround following June 1, 2007 for that process unit PRD(s), provided that the operator demonstrates to the satisfaction of the Executive Officer that the installation at an earlier date is not feasible or constitutes a safety hazard.

(E) Notwithstanding the requirements of subparagraphs (h)(1)(A) and (h)(1)(B), for any atmospheric process PRD, the operator of a refinery may use tamper-proof electronic valve monitoring devices in combination with continuous parameter monitoring or tamper-proof electronic valve monitoring devices and telltale indicators that in combination can record the duration of each release and quantify the amount of the compounds released, provided that the operator demonstrates on or before the compliance dates in subparagraphs (h)(1)(A) and (h)(1)(B) to the satisfaction of the Executive Officer that the combination of tamper-proof electronic valve monitoring devices, continuous parameter monitoring or telltale indicators represents the actual process conditions at the location of the process PRD release to the atmosphere.

(F) The requirements of subparagraphs (h)(1)(A) and (h)(1)(B) do not apply to atmospheric process PRDs that will be connected in such a manner as to direct all gases and vapors that can be released by an atmospheric process PRD to a VOC vapor recovery or control system no later than the next scheduled turnaround after

December 31, 2008, for that process equipment or unit associated with those atmospheric process PRD(s). The operator of a refinery must submit a revised compliance plan no later than December 31, 2008, that identifies the applicable atmospheric process PRD(s) and the schedule for connecting the atmospheric process PRD(s) to a VOC recovery or control system. Until such time that the atmospheric process PRD(s) are connected to a VOC vapor recovery or control system, the operator shall monitor all atmospheric process PRDs by use of electronic process control instrumentation that allows for real time continuous parameter monitoring or telltale indicators.

(G) The requirements of subparagraphs (h)(1)(A) through (h)(1)(F) do not apply to atmospheric process PRDs in liquid service that release to drains and are regulated under Rule 1176, provided that the operator demonstrates to the satisfaction of the Executive Officer that all released material meets the definition of heavy liquid.

(2) The operator of a chemical plant shall monitor atmospheric process PRDs located on process equipment by one of the following options:

(A) Install tamper-proof electronic valve monitoring devices capable of recording the duration of each release and quantifying the amount of compounds released on twenty percent of the atmospheric process PRD inventory. The operator shall install the electronic valve monitoring devices during the first turnaround after December 31, 2003; or

(B) Use of electronic process control instrumentation that allows for real time continuous parameter monitoring, starting July 1, 2004, and telltale indicators for the atmospheric process PRDs where parameter monitoring is not feasible. The telltale indicators shall be installed no later than December 31, 2004.

(3) The operator of a lubricating oil and grease re-refiner or a marine terminal shall monitor atmospheric process PRDs by use of electronic process control instrumentation that allows for real time continuous parameter monitoring, starting January 1, 2009, and telltale indicators for the atmospheric process PRDs where parameter monitoring is not feasible. The telltale indicators shall be installed no later than December 31, 2007.

(4) By December 31, 2007, the operator shall submit to the District a compliance plan or a revised compliance plan, containing the inventory of atmospheric process PRDs by size, set pressure and location, and indicate the option(s) chosen to comply with paragraphs (h)(1), (h)(2) and (h)(3). If applicable, the operator shall indicate the process parameter selected for continuous monitoring and the justification for such selection.

(5) Following any release from an atmospheric process PRD in excess of 500 pounds of VOC in a continuous 24-hour period, the operator shall conduct a failure analysis and implement corrective actions within 30 days to prevent the reoccurrence of similar releases.

(6) At a refinery with a crude oil throughput greater than 20,000 barrels per day, the operator shall, as practicable but no later than the first turnaround following the requirement to connect becomes effective, connect all atmospheric process PRDs serving that equipment to a vapor recovery or control system following:

(A) a second release in excess of 500 pounds of VOC in a continuous 24-hour period, within any five year period from any atmospheric process PRD serving the same piece or pieces of equipment or

(B) any release in excess of 2,000 pounds of VOC in a continuous 24-hour period, from any atmospheric process PRD serving the same piece or pieces of equipment.

(7) In lieu of complying with paragraph (h)(6), an operator may elect to pay a mitigation fee of $350,000 to the District for any release exceeding the thresholds in paragraph (h)(6) and any subsequent release. Within 90 days of the release, the operator shall notify the Executive Officer, in writing, of the election to pay a mitigation fee and submit payment as requested by the Executive Officer.

(i) Recordkeeping and Reporting Requirements

(1) The operator shall record all leaks, repairs and reinspections, as required in subdivision (f), and submit those records as quarterly or annual inspection reports to the Executive Officer no later than 30 days after the end of each calendar quarter or no later than 60 days after the end of the calendar year, respectively. Upon request by the Executive Officer, the operator shall include in the report the reason for extending the repair period for any component, as allowed in paragraph (g)(1). The operator

shall submit the records in an electronic format approved by the Executive Officer and they shall be certified in writing by the facility official responsible for the inspection and repair program.

(2) The operator shall include in all records of operator inspection and repair, at a minimum, the component identification and type, service, location, leak rate and date and time of inspection. The operator shall maintain these records at the facility for a period of at least two (2) years or five (5) years for a Title V facility and made available to the Executive Officer on request.

(3) The operator of a refinery, chemical plant, lubricating oil and grease re-refiner, or marine terminal shall:

(A) Notify the Executive Officer, by telephone or any other District approved method, of any atmospheric process PRD release in excess of the reportable quantity limits as stipulated in 40 CFR, Part 117, Part 302 and Part 355, including any release in excess of 100 pounds of VOC, within one hour of such occurrence or within one hour of the time said person knew or reasonably should have known of its occurrence;

(B) Submit a written report to the Executive Officer within 30 days following notification of an atmospheric process PRD release, providing the following information:

(i) PRD type, size and location.

(ii) Date, time and duration of the PRD release event.

(iii) Types of VOC released and individual amounts, in pounds, including supporting calculations.

(iv) Cause of the atmospheric process PRD release event.

(v) Corrective actions taken to prevent a subsequent PRD release.

(C) Submit quarterly reports for all monitored atmospheric process PRDs to comply with paragraphs (h)(1), (h)(2) and (h)(3) in an electronic format approved by the Executive Officer, indicating the parameter(s) monitored as a function of time, no later than 30 days after the end of each calendar quarter.

(D) Keep records of the process parameter(s) monitored for a period of five years, where elected to comply with paragraphs (h)(1), (h)(2)

and (h)(3) and make them available to the Executive Officer upon request.

(j) Test Methods

(1) Measurements of leak concentrations shall be conducted according to the United States Environmental Protection Agency (U.S. EPA) Reference Method 21 using an appropriate analyzer calibrated with methane. The analyzer shall be calibrated before inspection each day.

(2) The VOC content shall be determined according to ASTM Method D 1945 for gases, SCAQMD Method 304-91 for liquids. The percent VOC of a liquid evaporated at 150°C (302°F) shall be determined according to ASTM Method D 86.

(3) The flash point of heavy liquids shall be determined according to ASTM Method D 93.

(4) Equivalent Test Methods

A person may use other method to determine compliance with this rule provided it is demonstrated to be equivalent and approved in writing by the Executive Officers of the District, the California Air Resources Board (CARB), and the Regional Administrator of the U.S. EPA, Region IX, or their designees.

(k) Other Rules and Regulation Applicability

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.

(l) Exemptions

(1) 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 Executive Officer:

(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 Executive Officer except that the operator shall monitor these components for leaks when it is safe to do so. Upon detection of a leak, the operator shall repair or replace the component(s) 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 content of ten percent by weight or less, determined according to test methods specified in paragraph (j)(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) Components buried below ground.

(H) Pressure vacuum valves on storage tanks.

(I) Storage tank hatches subject to Rule 1178.

(2) The provisions of subdivision (h) and paragraphs (i)(2) and (i)(3) shall not apply to PRVs installed for protection from overpressure due to variation in ambient temperature provided that they are vented to drains or back into the pipeline. A person seeking an exemption under this paragraph shall supply proof of the applicable criteria to the satisfaction, upon request, of the Executive Officer.

(3) The provisions of Rules 466, 466.1, and 467 shall not apply to facilities subject to this rule.

(4) The provisions of paragraph (e)(1) and subdivision (f) shall not apply to components handling liquids with a flash point greater than 121°C (250°F), as determined according to the test method specified in paragraph (j)(3).

(5) Atmospheric PRD releases demonstrated to the satisfaction of the Executive Officer that result from natural disasters, acts of war or terrorism, or external power curtailment beyond the refinery's control, excluding power curtailment due to an interruptible service agreement, shall not be subject to the provisions of paragraphs (h) (6) and (h)(7).

(6) Except for the requirements of subdivision (e), the requirements of this rule shall not become effective as to lubricating oil and grease re-refiners and to marine terminals until December 31, 2007. Lubricating oil and grease re-refiners and marine terminals shall comply with the requirements of subdivision (e) no later than September 30, 2007.

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

(Adopted October 5, 1990)

RULE 1174. CONTROL OF VOLATILE ORGANIC COMPOUND EMISSIONS FROM THE IGNITION OF BARBECUE CHARCOAL

(a) Applicability

This rule applies to manufacturers, distributors, and/or retailers of materials and/or methods used to ignite barbecue charcoal.

(b) Definitions

1. BARBECUE CHARCOAL is any solid, carbon-based material used as a fuel source for outdoor direct-flame cooking.
2. CHIMNEY is a metal cylinder with a bottom grate and vent at the bottom to allow the flow of air. Paper tinder is placed on the grate and charcoal briquets are placed on top of the tinder.
3. ELECTRIC PROBE is any electric device designed and specifically marketed for the purpose of igniting charcoal.
4. VOLATILE ORGANIC COMPOUND (VOC) is any volatile compound of carbon, excluding methane, carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates, and ammonium carbonate.

(c) Requirements

1. A person shall not supply, sell, or offer for sale any material and/or methods used to ignite barbecue charcoal within the District, unless it has been demonstrated to the satisfaction of the Executive Officer, in accordance with District Test Protocol, that the VOC emissions resulting from the ignition of the barbecue charcoal are less than or equal to 0.02 pound of VOC per start.
2. Manufacturers, distributors, and/or retailers of materials or methods subject to provisions of subparagraph (c)(1) shall provide certification of the test performed, including product formulation and test results to the Executive Officer for approval.
3. Manufacturers, distributors, and/or retailers supplying, selling, or offering for sale within the jurisdiction of the District any barbecue charcoal ignition material or method not listed in (e), which has been approved by the Executive Officer, shall clearly and correctly indicate on the container that the material or method complies with District Rule 1174, and shall describe on the container the proper procedures for use or application of the method or material so that it complies with Rule 1174. This requirement may be satisfied by affixing a sticker or label to the container which sets forth this information.
4. Reformulation of a barbecue charcoal ignition material shall require recertification.

(d) Compliance Schedule

The provisions of this rule shall become effective January 1, 1992.

(e) Exemptions

The following methods/materials used to ignite barbecue charcoal will not require certification:

1. Electric starter (electric probe);
2. Chimneys using paper tinder;
3. Natural gas; and
4. Propane

(Adopted November 3, 1989)(Amended January 5, 1990)
(Amended May 13, 1994)(Amended September 7, 2007)
(Amended November 5, 2010)

RULE 1175. CONTROL OF EMISSIONS FROM THE MANUFACTURE OF POLYMERIC CELLULAR (FOAM) PRODUCTS

(a) Applicability

This rule shall apply to polymeric cellular products manufacturing operations including but not limited to expandable polystyrene, extruded polystyrene, 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 and storage emissions and consists of an emission collection system and a control device, which are approved, in writing, by the Executive Officer, that has been demonstrated to perform and operate according to the following provisions:

(A) The emission collection system shall collect at least 90 percent by weight of the manufacturing emissions; and

(B) The emission collection system shall collect at least 90 percent by weight of the storage emissions; and

(C) 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) CERTIFICATE OF ANALYSIS is a written document that cites the range of pentanes in expandable polystyrene bead, expressed as the percentage by weight of a manufactured bead-lot, prior to shipment from the manufacturer. It also contains the name of the manufacturer, a bead-lot number, and grade and type identifiers, along with a signature of an officer or an officer's designee of the bead-lot manufacturer.

(4) CHLOROFLUOROCARBON (CFC) is any chlorinated fluorinated compound of carbon.

(5) EXEMPT COMPOUNDS (see Rule 102 - Definition of Terms)

(6) 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.

(7) EXTRUDED POLYSTYRENE (XPS) FOAM OPERATIONS consist of a series of processes, where a blowing agent is injected into molten polystyrene and upon exit of the extrusion die the blowing agent vaporizes thus expanding the molten resin into foam, where it expands in both thickness and width, and includes directly associated processes that incorporate reprocessed material into XPS products. XPS products include but are not limited to food containers and insulation foams used in the construction of structures for both residential and commercial buildings, such as under concrete slabs, roofing, decks, steel and wood framed wall sheathing.

(8) LOW-PENTANE BEAD is an expandable polystyrene bead containing pentane as a blowing agent with an upper limit less than 4.0 percent by weight, prior to shipment, as certified upon delivery by an accompanying bead lot manufacturer's Certificate of Analysis.

(9) MANUFACTURING EMISSIONS are any emissions of VOC, CFC, or methylene chloride that occur during the manufacturing operation.

(10) 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.

(11) MID PENTANE BEAD is an expandable polystyrene bead containing pentane as a blowing agent within the range of 4.0 to 5.2 percent by weight, prior to shipment, as certified upon delivery with an accompanying bead lot manufacturer's Certificate of Analysis.

(12) RAW MATERIAL means all polystyrene beads, polyurethane, reprocessed material and blowing agent used in the manufacture of polymeric cellular products.

(13) REPROCESSED MATERIAL means all regrind trim, scrap or recycled material.

(14) RIGID POLYURETHANE is a closed cell polyurethane, primarily manufactured as rigid slabstock, laminated boardstock, field spray foam or pour-in-place foam.

(15) STORAGE EMISSIONS are VOC emissions occurring for a maximum of 48 hours after the polymeric cellular foam product is manufactured.

(16) VOLATILE ORGANIC COMPOUND (VOC) is as defined in Rule 102.

(c) Emission Control Requirements

(1) Manufacturing Operations, Excluding Expandable Polystyrene Molding Operations and Extruded Polystyrene Foam Operations

(A) No polyurethane operation subject to this rule shall use any VOCs.

(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 Molding and Extruded Polystyrene Foam Operations

The owner or operator of an expandable polystyrene molding operation or an extruded polystyrene foam operation shall demonstrate, to the satisfaction of the Executive Officer, 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 paragraphs (c)(1) or (c)(2), shall submit a plan to be approved by the Executive Officer, that demonstrates compliance with paragraph (c)(1) or (c)(2).

(4) The owner or operator of any polymeric cellular manufacturing operation that has not achieved the requirements specified in paragraph (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 twelve months of failing to meet the requirements of paragraph (c)(1), (c)(2), or (c)(3), the following provisions must be satisfied:

(i) An approved emission control system is installed and operated with all sources of manufacturing emissions collected and reduced according to subparagraphs (b)(1)(A) and (b)(1)(C); this system, including any critical operational techniques and parameters (e.g., minimum temperature and time in aging/curing areas venting to the control system, if applicable), must be incorporated in a federally enforceable permit, such as a Title V operating permit, as approved by the Executive Officer; and

(ii) All sources of storage emissions from the final manufactured product are collected and reduced according to subparagraphs (b)(1)(B) and (b)(1)(C) 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.

(5) Expanded polystyrene block molding operations may, in lieu of complying with the specific control requirements of clauses (c)(4)(B)(i) and (c)(4)B)(ii), collect and reduce, manufacturing emissions by at least 93 percent overall by weight (the product of capture and control device efficiencies), provided, at least 60 percent of the annual expanded polystyrene block throughput is manufactured with low-pentane bead and the remainder with mid-pentane bead. Any owner or operator of a facility who elects to comply using this alternate compliance method shall demonstrate the requisite 93 percent reduction through a source test approved in writing by the Executive Officer. Facilities with a Title V permit shall repeat such demonstration every five (5) years. This alternate compliance method, including any critical operational techniques and parameters (e.g., minimum temperature and time in aging/curing areas venting to the control system, if applicable), must be incorporated in a federally enforceable permit, such as a Title V operating permit, as approved by the Executive Officer.

(6) The owner or operator of a facility utilizing an approved emission control system shall conduct source testing, to be approved in writing by the Executive Officer, to demonstrate compliance with paragraphs (c)(2) or

(c)(4). Facilities with a Title V permit shall repeat such demonstration every five (5) years.

(d) Prohibition of Use

No polymeric cellular product operation subject to this rule shall use methylene chloride, or any CFC, unless specifically approved as an acceptable alternative under 40 CFR Part 82 Subpart G – Significant New Alternatives Policy Program.

(e) 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 clause (c)(4)(B)(ii) shall not apply to any facility that only manufactures:

(A) Rigid polyurethane foam; or

(B) Expanded polystyrene 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 written protocol submitted to and approved by the Executive Officer.

(f) Recordkeeping

(1) Any owner or operator subject to this rule or claiming an exemption under subdivision (e) 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 five (5) years and be made available to the Executive Officer upon request.

(2) Owners and/or operators using any 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 needed to demonstrate compliance with paragraphs (c)(4), (c)(5) and (c)(6). Such records shall be retained in the

operator's files for a period of five (5) years and be made available to the Executive Officer upon request.

(g) Methods of Analysis

All applicable methods of analysis shall be as cited in paragraphs (g)(1) through (g)(4) below, or any other applicable method approved by the Executive Officer, the United States Environmental Protection Agency (U.S. EPA), and the California Air Resources Board (CARB), provided the approved alternative method is equivalent to those listed below.

(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) U.S. EPA 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 subdivision (c), only when manufacturers specify which individual compounds are used in the manufacture of polymeric cellular products:

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 U.S. EPA, CARB, and SCAQMD approved test methods used 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) Capture efficiency specified in paragraph (b)(1) or paragraph (c)(5) shall be determined by the procedures presented in the U.S. EPA technical guidance document “Guidelines for Determining Capture Efficiency, January 9, 1995”, or U.S. EPA Methods 204 A-F.

(B) The efficiency of the control device of the emission control system specified in paragraph (b)(1) or paragraph (c)(5) and the VOC content in the control device exhaust gases, measured and calculated as carbon, shall be determined by U.S. 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 of Non-Methane Non-Ethane Organic Compound Emissions from Clean Fueled Combustion Sources) as applicable. U.S. EPA 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) (Amended September 13, 1996)

RULE 1176. VOC EMISSIONS FROM WASTEWATER SYSTEMS

(a) Purpose

This rule is intended to limit volatile organic compound (VOC) emissions from wastewater systems.

(b) Applicability

This rule applies to wastewater systems and associated control equipment located at petroleum refineries, on-shore oil production fields, off-shore oil production platforms, chemical plants, and industrial facilities.

(c) Definitions

For purposes of this rule, the following definitions apply:

(1) CATCH BASIN is an open basin which serves as a single collection point for rainwater or stormwater run-off directly from ground surfaces.

(2) AIR POLLUTION CONTROL (APC) DEVICE means air pollution control equipment which eliminates, reduces or controls the issuance of air contaminants.

(3) BACKGROUND LEVEL is the ambient concentration of VOC in the air as measured pursuant to paragraph (h)(1).

(4) CERTIFIED INSPECTOR is a person who has successfully completed a District approved fugitive emissions compliance inspection program and holds a current valid inspector certificate issued by the Executive Officer.

(5) CERTIFIED INSTRUCTOR is a person who has successfully completed a District fugitive emissions compliance inspection program or any other program determined to be equivalent and approved by the Executive Officer and holds a current valid instructors certificate issued by the Executive Officer.

(6) CHEMICAL PLANT is any facility engaged in producing chemicals, and/or manufacturing products by chemical processes. Any facility or operation that has 282 as the first three digits in its Standard Industrial Classification Code as defined in the Standard Industrial Classification Manual is included in this definition.

(7) CLOSED VENT SYSTEM is a system that is not open to the atmosphere and that is composed of piping, ductwork, connections, and if necessary, flow-inducing devices that collect and transport gas or vapor from an emission source to an APC device or into gas recovery and/or combustion equipment. In that case, gas recovery and/or combustion equipment shall not be considered a closed vent system and is not subject to closed vent system standards.

(8) DRAIN SYSTEM COMPONENT (DSC) is a process drain, manhole cover, junction box vent or other wastewater system vent, excluding closed vent systems. DSCs are categorized as follows:

(A) NON-EMITTING DSC is a DSC which is controlled using a gas tight barrier between the sewer and the atmosphere that for the most recent six month period does not emit VOC emissions, or is a DSC which is uncontrolled that for the most recent 24 month period does not emit VOC emissions, as measured pursuant to paragraph (h)(1) in excess of 10 ppm above background level.

(B) LOW-EMITTING DSC is a DSC that has not emitted excess emissions for the most recent six month period or is effectively controlled pursuant to subparagraph (e)(7)(A).

(C) HIGH-EMITTING DSC is a DSC that has at least one excess emission in the most recent six months.

(D) REPEAT-EMITTING DSC is a petroleum refinery DSC that has emitted excess emissions at least three times during any consecutive 12 months, unless it has been effectively controlled pursuant to subparagraph (e)(7)(A).

(9) DSC CONTROL is any control measure for a DSC which utilizes water seal controls, APC devices, hardpiping, or complete capping, plugging, or source elimination. Any other alternate control measure such as permanent source reduction may qualify as a DSC control, if approved in writing by the Executive Officer.

(10) EXCESS EMISSIONS are VOC emissions measured pursuant to paragraph (h)(1) to be greater than 500 ppm above background levels.

(11) FIXED COVER is any impermeable cover installed in a permanent stationary position.

(12) FLOATING COVER is any impermeable cover which is in contact with a liquid surface at all times.

(13) INACCESSIBLE DSC is any DSC located over 15 feet above ground when access is required from the ground; or any component located over six feet away from a platform when access is required from a platform; or any component which would require the elevation of monitoring personnel higher than six feet above permanent support surfaces. Inaccessible DSCs do not include DSC vents and wastewater system associated vents, where the vent pipes are extended more than four feet in length.

(14) INDUSTRIAL FACILITIES are those engaged in the production and distribution of natural gas, pipeline distribution or wholesale distribution of crude petroleum and petroleum products , as classified under the Standard Industrial Classification group numbers 492, or 461, respectively, of the Standard Industrial Classification Manual.

(15) JUNCTION BOX is a structure with a manhole or access point to a wastewater sewer system lines.

(16) NON-CONTACT WATER is any water which does not come into contact with wastewater.

(17) OIL PRODUCTION FIELD is a facility at 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.

(18) PETROLEUM REFINERY is a facility that processes petroleum, as defined in the Standard Industrial Classification Manual as Industry No. 2911, Petroleum Refining.

(19) PROCESS DRAIN is any opening (including covered or controlled openings) which is installed or used to receive or convey wastewater into the wastewater system.

(20) SEPARATOR FOREBAY is that section of a gravity-type separator which receives the untreated wastewater from the preseparator flume and acts as a header which distributes the influent to the separator channels.

(21) SEWER LINE is a lateral trunk line, branch line, ditch, channel, or other conduit used to convey wastewater.

(22) SUMP is a surface impoundment or excavated depression in the ground, which is part of the wastewater system and used for storage of wastewater or separation of petroleum liquids, VOC containing liquids, water, and/or solids.

(23) VOLATILE ORGANIC COMPOUND (VOC) is as defined in Rule 102.

(24) WASTEWATER is a water stream or other liquid waste stream generated in a manner which may contain petroleum liquid, emulsified oil, VOC, or other hydrocarbons.

(25) WASTEWATER SEPARATOR is any device, used to separate petroleum liquids and/or VOC containing liquids from wastewater including such devices as separator forebays, clarifiers and tanks including dissolved air flotation tanks, induced gas flotation tanks and induced air flotation tanks.

(26) WASTEWATER SYSTEM is any system which consists of one or more process drains, sewer lines, junction boxes, manholes, sumps, or wastewater separators, including all of their associated components, used to receive, convey, separate, treat, or process wastewater.

(27) WATER SEAL CONTROL is a seal pot, p-leg trap, or other type of trap filled with any non-VOC containing liquid to create a liquid barrier between the sewer and the atmosphere.

(d) Identification Requirements

The facility operator shall comply with the following provisions:

(1) Requirements for Facilities other than Petroleum Refineries:

Within 60 days of written request by the Executive Officer, submit a detailed schematic drawing identifying the location within the facility of all the components of the wastewater system and all associated APC devices. In lieu of identifying the locations of the DSCs on the schematic, the DSCs locations may be identified on a separate list attached to the schematic.

(2) Requirements for Petroleum Refineries:

By June 30, 1997, submit to the District a compliance plan which shall include the following:

(A) A statement regarding which compliance option listed in either subparagraphs (e)(7)(A) or (e)(7)(B) has been chosen; and

(B) A detailed schematic drawing of the location of the wastewater system, within the facility. The schematic shall also include all of the APC devices associated with the wastewater system; and

(C) A complete DSC list identifying their total number, individual location and if controlled, the type of DSC control. The list shall also identify each DSC as either non-emitting, low-emitting, high-emitting, or repeat-emitting according to the initial monitoring

frequency in subparagraph (f)(1)(A). Historical monitoring data collected during the most recent 12 months may be used to categorize each DSC in lieu of subparagraph (f)(1)(A), except for uncontrolled non-emitting DSCs which shall be required to use the most recent 24 months of historical data. Any inaccessible DSC shall be identified for District's verification and approval; and

(D) Historical monitoring data and/or the monitoring data collected pursuant to subparagraph (f)(1)(A) used to categorize each DSC, and

(E) An identification of the proposed methods of control, if necessary, for each junction box vent based on its emission characteristics; and

(F) Any alternate DSC control which is not already identified in paragraph (c)(9) and the operator requests approval in advance by the Executive Officer for use as a DSC control. A complete description of the proposed DSC control and its specific applications shall be included.

(e) Operation and Control Requirements

The facility operator shall comply with the following provisions:

(1) Wastewater System Emissions:

Wastewater systems and closed vent systems, except sump and wastewater separator covers in compliance with clause (e)(2)(B)(vi), shall not emit VOC emissions measured pursuant to paragraph (h)(2) to be greater than 500 ppm above background levels according to the compliance dates in Table 1. The compliance date in Table 1 may be extended pursuant to subparagraphs (e)(2)(C) and (e)(5)(B).

Table 1

EQUIPMENT	COMPLIANCE DATE
Separator forebays, clarifiers, dissolved air flotation tanks, induced gas flotation tanks, and induced air flotation tanks which are not controlled.	June 30, 1997
Sumps which are not controlled.	June 30, 1997
Junction box vents and manhole cover openings.	June 30, 1997
All other parts of the wastewater system not specifically listed above.	November 3, 1989

(2) Sumps and Wastewater Separators :

(A) Sumps and Wastewater Separators shall be provided with one of the following except as provided in subparagraph (e)(2)(C):

(i) A floating cover equipped with seals.

(ii) A fixed cover, equipped with a closed vent system vented to an APC device as specified in paragraph (e)(6).

(iii) Any other alternate control measure which is demonstrated by the facility operator to be equivalent to, or more effective in reducing VOC emissions than the requirements of clauses (e)(2)(A)(i) or (e)(2)(A)(ii), and approved in writing by the Executive Officer.

(B) Sump and Wastewater Separator Covers, both fixed and floating, shall meet all of the following requirements:

(i) The cover material shall be impermeable to VOCs, and free from holes, tears, or openings.

(ii) Drains on covers shall be provided with a slotted membrane fabric cover, or equivalent, over at least 90 percent of the open area.

(iii) Gauging or sampling openings on the separator shall be covered. The covers shall be kept closed, with no visible gaps between the cover and the separator, except when the gauging or sampling device is actively being used.

(iv) Hatches on covers shall be kept closed and free of gaps, except when opened for active inspection, maintenance, sampling, or repair.

(v) The perimeter of a cover, except for a floating cover, shall form a seal free of gaps with the foundation to which it is attached.

(vi) A floating cover shall be designed and maintained so that the gap between the separator or sump wall and the seal does not exceed 1/8 inch for a cumulative length of 97 percent of the perimeter of the separator. No gap between the wall and the seal shall exceed 1/2 inch.

(C) For initial modification of sumps, separator forebays, clarifiers, dissolved air flotation tanks, induced gas flotation tanks, or induced air flotation tanks to comply with subparagraphs (e)(2)(A)

and (e)(2)(B) which require a permit to construct, compliance with paragraph (e)(1) and subparagraphs (e)(2)(A) and (e)(2)(B) shall be achieved no later than six months after the District issues the initial permit to construct, provided that a complete application for a permit to construct is submitted to the District on or before November 13, 1996.

(3) Sewer lines:

(A) All sewer lines shall be completely enclosed so that no liquid surface is exposed to the atmosphere. The manhole cover shall remain fully closed, except when opened for active inspection, maintenance, sampling, or repair.

(B) By June 30, 1997, all openings in the sewer line manhole covers shall be completely sealed.

(4) Process drains:

Any new process drain installed after September 13, 1996, shall be equipped with water seal controls or any other alternative control measure which is demonstrated by the applicant to be equivalent, or more effective than water seal controls in reducing VOC emissions, as approved in writing by the Executive Officer.

(5) Junction boxes:

(A) Junction boxes shall be totally enclosed with a solid, gasketed, fixed cover or a manhole cover. Each fixed cover shall be allowed to have an open vent pipe no more than four inches in diameter and at least three feet in length. Each manhole cover on junction boxes shall be allowed to have openings totaling no more than 12 square inches. The manhole cover shall remain fully closed, except when opened for active inspection, maintenance, sampling, or repair.

(B) For initial modification of junction boxes to comply with paragraph (e)(1), compliance shall be achieved no later than six months after the District issues the initial permit to construct for the DSC controls which require a permit to construct, provided that a complete application for a permit to construct is submitted to the District on or before June 30, 1997.

(6) APC Devices shall meet one of the following requirements:

(A) An APC device receiving vapors from a closed vent system shall achieve a control efficiency of 95 percent by weight or greater of VOC. An annual performance test shall be conducted to determine the APC device control efficiency according to the test method specified in paragraph (h)(3),

(B) The outlet of the APC device shall not emit VOC emissions measured pursuant to paragraphs (h)(1) or (h)(2) to be greater than 500 ppm above background. The frequency of monitoring shall be at least monthly, or

(C) Any APC device or other alternate system that collects vapors through a closed vent system and subsequently controls the vapors in a device, which has been issued a permit to construct or a permit to operate by the Executive Officer, and determined by the Executive Officer to provide an equivalent level of VOC emission controls as specified in subparagraphs (e)(6)(A) or (e)(6)(B).

(7) Additional Requirements for DSCs at Petroleum Refineries:

Comply with the control requirements of either subparagraphs (e)(7)(A) or (e)(7)(B) according to the schedule specified in these subparagraphs.

(A) Control of Repeat Emitting DSCs:

Within 60 days or longer, as approved by the Executive Officer, after a DSC becomes a repeat emitting DSC, effectively control the DSC by installing a DSC control, if previously uncontrolled, or a more efficient DSC control to eliminate excess emissions from the DSC.

(B) Control of All DSCs:

DSC controls shall be installed on all DSCs that are uncontrolled as of September 13, 1996, according to the following schedule:

(i) At least 25 percent of uncontrolled DSCs by December 31, 1997,

(ii) At least 50 percent of uncontrolled DSCs by December 31, 1998,

(iii) At least 75 percent of uncontrolled DSCs by December 31, 1999, and

(iv) 100 percent of uncontrolled DSCs by December 31, 2000.

(f) Inspection, Monitoring and Maintenance Requirements

The facility operator shall comply with the following provisions:

(1) Inspection and Monitoring Frequency:

Wastewater systems and closed vent system(s) shall be inspected and monitored according to the following monitoring frequency:

(A) For Petroleum Refineries Choosing Option (e)(7)(A):

Inspect and monitor wastewater separators, closed vent systems, and all DSCs monthly until the compliance plan is submitted pursuant to paragraph (d)(2). After the compliance plan is submitted:

(i) Inspect and monitor the wastewater system according to Table 2, or

(ii) After June 30, 1997, inspect and monitor the wastewater system according to Table 2, except that low-emitting DSCs may be monitored semi-annually, provided that:

(I) 0.5 percent or less of all DSCs, have emitted excess emissions as measured pursuant to paragraph (h)(1) for the most recent 12 month period, and

(II) The above is substantiated by documentation of the verified inspection and monitoring records, and submitted to the District for written approval by the Executive Officer.

The inspection and monitoring frequency, approved in clause (f)(1)(A)(ii), shall revert to clause (f)(1)(A)(i), should the facility operator's inspection records or District inspection show that greater than 0.5 percent of all DSCs have emitted excess emissions measured pursuant to paragraph (h)(1) in excess of the level specified in subclause (f)(1)(A)(ii)(I).

Table 2	
EQUIPMENT	FREQUENCY
Wastewater separator(s) and associated closed vent system(s)	Monthly
High-Emitting DSCs	Monthly
Low-Emitting DSCs	Quarterly
Non-Emitting DSCs	Semi-annually
Inaccessible DSCs	Annually

(B) Petroleum Refineries Choosing Option (e)(7)(B):

(i) Inspect and monitor wastewater separators, closed vent systems, and all DSCs monthly until the compliance plan is submitted pursuant to paragraph (d)(2).

(ii) After the compliance plan is submitted, inspect and monitor the wastewater system according to Table 3.

Table 3	
EQUIPMENT	FREQUENCY
Wastewater separator(s) and associated closed vent system(s).	Monthly
DSCs (Excluding Non-Emitting DSCs)	Quarterly
Non-Emitting DSCs	Semi-annually
Inaccessible DSCs	Annually

(C) For Oil Production Fields, Chemical Plants, and Industrial Facilities:

Effective September 13, 1996, inspect and monitor wastewater separator(s), associated closed vent system(s) and DSCs quarterly, except that non-emitting DSCs and inaccessible DSCs, may be inspected annually.

(2) On or after July 1, 1997, or a later date as approved in writing by the Executive Officer, all inspections and monitoring required under paragraph (f)(1) shall be done by a certified inspector.

(3) Wastewater systems with excess emissions or otherwise found in violation through either operator inspection or District inspection shall be repaired

or rectified within three calendar days of detection. The repaired or rectified component shall be reinspected by the facility operator between 24 hours to 48 hours for petroleum refineries and between 24 hours to 15 calendar days for other facilities after the repair or rectification to ensure that the repaired or rectified component is in compliance with this rule. The operator shall take all feasible steps to minimize emissions during the repair or replacement period.

(g) Recordkeeping, Reporting and Verification of Records Requirements

The facility operator shall comply with the following provisions:

(1) Recordkeeping:

(A) All records shall be maintained at the facility for a period of two years and made available to District staff upon request.

(B) Any operator using an APC device for a wastewater system as a means of complying with this rule, shall maintain records of system operation or maintenance which will demonstrate proper operation and compliance of the APC device during periods of emission producing activities.

(C) Inspection records for the wastewater system shall be made and documented as follows:

(i) The inspection record shall include and document all written or machine recorded operator inspections, VOC measurements including corresponding background levels, source tests, repairs, replacements, and reinspection records.

(ii) The inspection record shall include the date(s) they were taken.

(iii) The inspection record shall include the name and signature of the certified inspector(s). An electronic identification code may be used instead of a signature provided that the certified inspector verifies, in writing, that he or she has conducted the inspection and monitoring.

(2) Reporting requirements for refineries:

(A) Any change to the wastewater system or any other component required to be identified by paragraph (d)(2), shall be submitted to

the District within 60 calendar days after construction is completed.

(B) For facility operators complying with subparagraph (e)(7)(A), a quarterly report shall be submitted to the District in a format approved by the Executive Officer, within 30 calendar days after the end of each quarter. The report shall include all of the following:

(i) The identification of all DSCs with recordings of excess emissions and the corresponding levels of emissions in ppm,

(ii) The identification of repeat emitting drains including each record of excess emissions and subsequent repairs within the last 12 months before corrective actions,

(iii) The corrective actions taken pursuant to subparagraph (e)(7)(A), and

(iv) Each monitoring record after corrective actions until the report is submitted.

(C) For facility operators complying with subparagraph (e)(7)(B), semi-annual reports shall be submitted to the District, each within 30 days after the end of each six month period, showing:

(i) Which DSCs identified in paragraph (d)(2) have been controlled and the type of control, until all DSCs are controlled, and

(ii) All DSCs identified to have an excess emission.

(3) Verification of Records:

All inspection records and reports submitted to the District, shall be signed by the facility official with responsibility for operation of the equipment subject to this rule, to verify that the inspection(s) have been conducted by certified inspectors consistent with the requirements of this rule.

(4) Any inaccurate verification of inspection records shall constitute a violation of this rule.

(h) Test Methods

(1) EPA Reference Method 21:

Measurement of gaseous VOC concentration shall be conducted according to EPA Reference Method 21, using an appropriate analyzer calibrated

with methane, or any other method demonstrated by the applicant to be equivalent and approved in writing by the Executive Officers of the District, the California Air Resources Board (CARB), and the Regional Administrator of the United States Environmental Protection Agency (U.S. EPA), Region IX, or their designees. Background level shall be measured using the Method 21 procedure for determining local ambient concentration around the source.

(2) District Grab Sample Method:

Sampling and analysis shall be conducted according to the test methods contained in Attachment A, or any other procedure and method demonstrated by the applicant to be equivalent and approved in writing by the Executive Officers of the District, the CARB, and the Regional Administrator of the U.S. EPA, Region IX, or their designees.

(3) EPA Reference Method 25:

Measurement of control efficiency of an air pollution control device shall be conducted according to EPA Reference Method 25, District Test Method 25.1, or any other method demonstrated by the applicant to be equivalent and approved in writing by the Executive Officers of the District, the CARB, and the Regional Administrator of the U.S. EPA, Region IX, or their designees. Emissions determined to exceed any limits established by this rule through either of the referenced test methods in paragraph (h)(3) shall constitute a violation of this rule. Test procedures shall be performed in accordance with a protocol approved by the Executive Officer.

(i) Exemptions

Specified provisions of this rule shall not apply if the wastewater system meets the applicable criteria shown below. Any person seeking to qualify for any one of the following exemptions has the burden of proving its wastewater system meets the applicable specified criteria:

(1) The provisions of subdivision (e) shall not apply to equipment which, if covered, would present unavoidable explosion or fire hazards, as approved in writing by the Executive Officer.

(2) The provisions of paragraph (e)(1) shall not apply to process drains while receiving petroleum liquids and/or VOC containing liquids.

(3) The provisions of paragraph (e)(1) and subparagraph (e)(2)(B) shall not apply to components which the facility operator has detected and recorded to be in violation or to emit excess emissions, prior to District discovery and which is repaired and reinspected pursuant to paragraph (f)(3). This exemption is limited to the period of time between recording and reinspection.

(4) The provisions of paragraph (e)(6) and subparagraph (f)(1)(C) shall not apply to natural gas handling facilities which are primarily operated to receive and inject natural gas into the ground for underground storage and subsequent processing and distribution 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 Untilities Commission, provided that:

(A) None of the wastewater separators, DSCs, closed vent systems and APC devices at the facility emit VOC emissions greater than 500 ppm as measured pursuant to paragraph (h)(2) at any time, and

(B) The facility operator requests this exemption and provides inspection and monitoring records for the most recent two years, which demonstrates compliance with subparagraph (i)(4)(A), for the most recent two years, and the request is approved in writing by the Executive Officer.

This approval and exemption shall automatically expire should facility operator's subsequent inspection records or District inspection show that the facility does not comply with the requirements of subparagraph (i)(4)(A). If the exemption is lost due to non-compliance with subparagraph (i)(4)(A), the facility may reapply for an exemption pursuant to subparagraph (i)(4)(B)

(5) All the provisions of this rule shall not apply to the following:

(A) Components which present a safety hazard for inspection as documented and established in a previous safety manual or policy, or with the prior written approval of the Executive Officer except that these components shall be monitored for excess emissions when it is safe to do so. Upon detection, the excess emission shall be corrected as soon as the repairs or replacement can be carried out safely.

(B) Wastewater separator pressure-vacuum valves when open, due to a vacuum produced within the wastewater system.

(C) Spill containments for tanks.

(D) Open pipe channels designed for spill containment.

(E) Tanks subject to Rule 463.

(F) Valves, fittings, pumps, compressors, pressure relief devices, diaphragms, hatches, site-glasses, and meters which are subject to or exempt from the requirements of Rule 1173.

(G) Equipment, including catch basins, that exclusively receive, hold, or discharge rainwater, stormwater runoff, or non-contact water.

(H) 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.

(I) Sampling junction boxes of the wastewater system prior to discharge into the municipal sewer lines and which are designated as the legal sample point on the facility's industrial wastewater permit.

(J) Wastewater system(s), if the VOC content of each liquid stream entering each sump and/or wastewater separator does not exceed at all times 5 mg per liter, as determined by EPA Test Method 8240 or any other method demonstrated by the applicant to be equivalent and approved in writing by the Executive Officers of the District, the CARB, and the Regional Administrator of the U.S.-EPA, Region IX, or their designees. Samples of the liquid stream shall be collected from each inlet to the sump and/or wastewater separator. A safe sampling site or sampling port to meet the requirements of this subparagraph shall be installed upon request of the Executive Officer. The sampling site or port shall be installed within two weeks after request by the Executive Officer or by any other date as approved by the Executive Officer.

(K) Biological wastewater treatment units and their downstream equipment in a secondary treatment system that is installed and operated to meet the National Pollutant Discharge Elimination System (NPDES) discharge requirements if the VOC content of each liquid stream entering the secondary treatment system does

not exceed at all times 5 mg per liter, as determined by EPA Test Method 8240 or any other method demonstrated by the applicant to be equivalent and approved in writing by the Executive Officers of the District, the CARB, and the Regional Administrator of the U.S.-EPA, Region IX, or their designees. Samples of the liquid stream shall be collected from each inlet to the sump and/or wastewater separator. A safe sampling site or sampling port to meet the requirements of this subparagraph shall be installed upon request of the Executive Officer. The sampling site or port shall be installed within two weeks after request by the Executive Officer or by any other date as approved by the Executive Officer.

(L) Sanitary sewers and sanitary sewer systems not processing wastewater.

ATTACHMENT A

District Grab Sample Method

The grab sample procedure and method of analysis shall be according to the following:

1. Sampling Apparatus

The sampling system shall consist of at a minimum:

a. A 3 liter volume type 316 stainless steel tank.
b. A valve for leak tight shut off.
c. Two vacuum gauges which can measure 0 inch Hg to 30 inches of Hg.
d. A glass rotameter which can accurately measure a flowrate of 1 liter per minute and larger.
e. A one-eighth inch diameter Teflon connector.
f. An inlet probe, and metallic fittings.

The dead space volume in the sample line shall be kept to a minimum. All metallic components including the gauges shall be constructed of stainless steel. A type 304 stainless steel tank may be allowed provided there are no acids in the sample. Refer to Figure 1 for a schematic diagram of the sampling apparatus. The glass rotameter shall be calibrated once every three months.

2. Sample Tank Evacuation and Leak Check

The evacuation and leak check of the sample tank shall be performed according to the corresponding section of EPA Method 25.

3. Leak Check the Sampling Line

3.1. The sampling line shall be leak checked at the site before and after sampling using the following procedure:
   a. Cap the inlet probe.
   b. Open the shut off valve slowly and briefly to allow 1 inch of Hg of vacuum in the line.
   c. Close the valve immediately.
   d. The sampling line is leak free if there is no change in vacuum for one minute.

3.2. As an alternative, the sampling line may be leak checked before and after sampling using the following procedure:
   a. Insert one end of a vacuum gauge at the inlet probe.
   b. Cap or seal the other end of the vacuum gauge attached to the probe.
   c. Follow procedures 3.1.b. through 3.1.d.

4. Sampling

a. Purge the sample line.
b. Record the vacuum prior to sampling.
c. Use the section on “Individual Source Surveys” of EPA Reference Method 21 to take samples with the inlet probe of the sampling apparatus.

d. The rotameter shall be level to the horizon.
e. Open the shut off valve slowly.
f. Adjust the rotameter to a constant 1 liter per minute flowrate. Maintain this constant flowrate throughout sampling.
g. Close the shut off valve when the vacuum has dropped to between 5-10 inches of Hg.
h. Record the vacuum after sampling is completed.

5. Analysis of Sampling

The sample shall be analyzed according to the applicable analytical gaseous sections of EPA Method 25, or District Test Method 25.1.

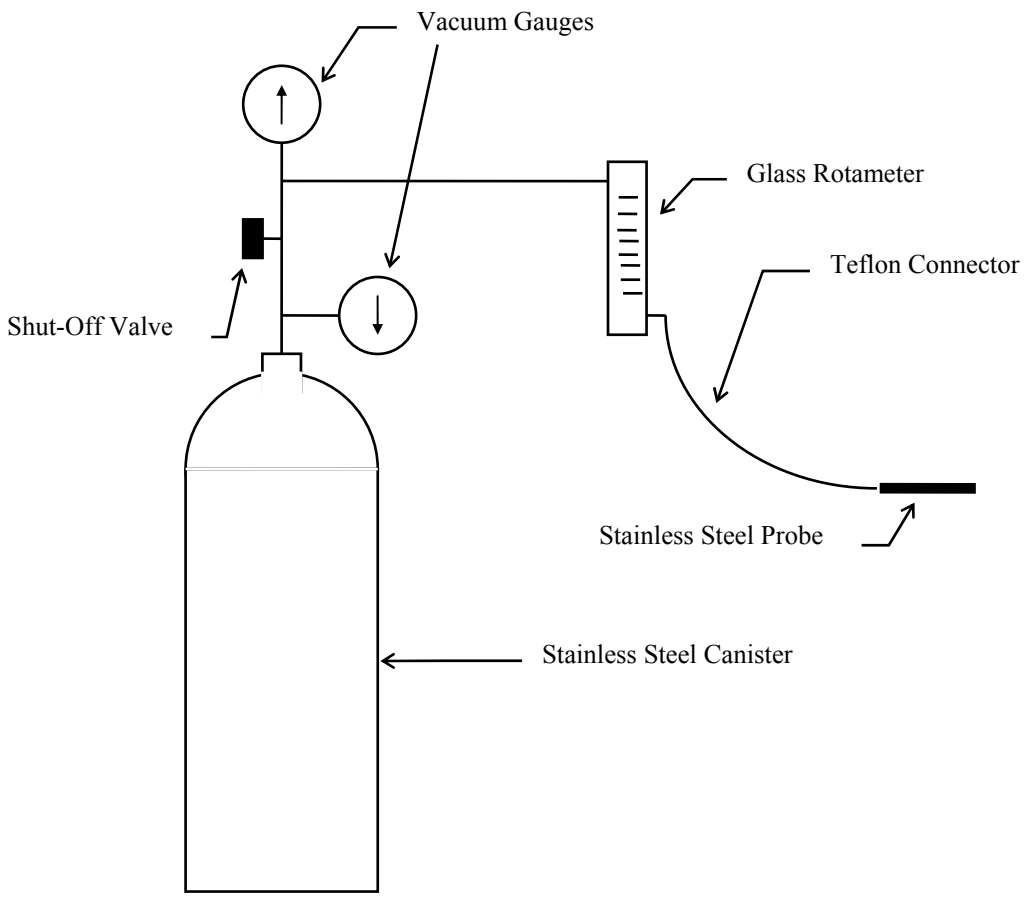


Figure 1
Schematic Diagram of Sampling Apparatus

(Adopted June 1, 2012)

RULE 1177. LIQUEFIED PETROLEUM GAS TRANSFER AND DISPENSING

(a) Purpose

The purpose of this rule is to reduce emissions of volatile organic compounds (VOCs) associated with the transfer and dispensing of liquefied petroleum gas (LPG).

(b) Applicability

This rule applies to the transfer of LPG from any cargo tank, stationary storage tank or cylinder into any other cargo tank, stationary storage tank, cylinder, or portable storage tank.

(c) Definitions

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

(1) BOBTAIL TRUCK is a vehicle that is equipped with a cargo tank without a trailer and is used to deliver propane.

(2) BUBBLE TEST is the application of a soap solution, detergent, aerosol spray or similar material that promotes the formation of bubbles at the site of any potential LPG vapor leak source and observing for bubbles.

(3) CARGO TANK is a container that is used to transport LPG and is either mounted on a conventional truck chassis or is an integral part of a cargo transporting vehicle, such as a bobtail, mobile fueler or rail tank car.

(4) CONNECTOR is any component, including an adapter, hose, fitting, valve or coupling that is used to facilitate the transfer of LPG from one container to another, and that is disconnected following completion of an LPG transfer or dispensing activity.

(5) CONTAINER is any vessel, including cylinders, stationary tanks, portable storage tanks, and cargo tanks, used for the transporting or storage of LPG.

(6) CYLINDER is a container designed, constructed, tested and marked in accordance with U.S. Department of Transportation (DOT) specifications, Title 49, Code of Federal Regulations or in accordance with a valid DOT special permit.

(7) FILL BY WEIGHT is the filling of an LPG container without use of an FLLG and monitoring the fill level to prevent overfilling by weighing the container and the LPG in the container and limiting the filling to no more than the rated maximum capacity.

(8) FIXED LIQUID LEVEL GAUGE (FLLG) is a liquid level indicator that uses a positive shutoff vent valve to indicate that the liquid level in a container being filled has reached the point at which the indicator communicates with the liquid level in the container.

(9) INSPECTION is a physical survey of all LPG connectors for evidence of leakage through use of a bubble test. Use of a test method in accordance with subdivision (h) may be substituted for an inspection.

(10) LIQUID TIGHT is a visible liquid leak rate not exceeding three drops per minute or exhibiting a visible liquid mist.

(11) LOW EMISSION FLLG is fixed liquid level gauge with a number 72 orifice size (0.025 inch) or physical configuration that results in an equivalent or lower emission rate that is tested and demonstrated using a method for which written approval of the Executive Officer has been obtained.

(12) LPG or LIQUEFIED PETROLEUM GAS is an organic compound having a vapor pressure not exceeding that allowed for commercial propane that is composed predominantly of the following hydrocarbons, either by themselves or as mixtures: propane, propylene, butane (normal butane or isobutane) and to a lesser extent butylenes, and that is stored and transported under pressure in a liquid state.

(13) LPG BULK LOADING FACILITY is an LPG transfer and dispensing facility where the primary function is to store LPG for further distribution and has one or more stationary storage tanks with a water capacity of 10,000 gallons or more.

(14) LPG LOW EMISSION CONNECTOR is any component, including an adapter, hose, fitting, valve or coupling that is used to facilitate transfer of LPG from one container to another and that is designed to result in a maximum emission release of four (4) cubic centimeters of LPG when disconnected.

(15) LPG TRANSFER AND DISPENSING FACILITY is a mobile fueler or a stationary facility consisting of one or more stationary storage tanks and associated equipment which receives, stores and either transfers or

dispenses LPG to stationary storage tanks, cargo tanks, or portable storage tanks.

(16) LPG VAPOR RECOVERY OR EQUALIZATION SYSTEM is a system installed on an LPG mobile fueler or a rail tank car that facilitates the transfer of liquid LPG and allows for the collection and recovery of LPG vapors displaced or emitted from the stationary storage tank, or cargo tank when LPG is transferred to or from the mobile fueler or rail tank car.

(17) LPG VAPORS are the organic compounds in vapor form as well as entrained liquid LPG displaced during LPG transfer and dispensing operations.

(18) MOBILE FUELER is any tanker truck or trailer, including a bobtail truck, which is used to transport LPG stored in an onboard cargo tank.

(19) OWNER/OPERATOR is any person who owns, leases, or operates any facility subject to this rule.

(20) PORTABLE CYLINDER is a container that is designed, constructed, tested and marked in accordance with U.S. Department of Transportation (DOT) specifications, Title 49, Code of Federal Regulations or in accordance with a valid DOT special permit. Examples of portable cylinders that contain LPG include those used with small hand torches, forklifts, barbecue grills and agricultural weed burners.

(21) PORTABLE STORAGE TANK is a container or portable cylinder designed to be moved readily, as opposed to a container or stationary cylinder designed for stationary installations.

(22) RAILROAD TANK CAR is a mounted cargo tank designated for transport over rail.

(23) STATIONARY CYLINDER is the largest DOT approved cylinder and is typically used in residential, commercial and industrial applications.

(24) STATIONARY STORAGE TANK is a container that is used for the storage of LPG, including, but not limited for residential, commercial or industrial usage, and includes containers constructed in accordance with the American Society of Mechanical Engineers Code .

(25) VALVE is a device that regulates or isolates the fluid flow in a pipe, tube, tank, or conduit by means of an external actuator.

(26) VAPOR TIGHT is the leak-free condition of LPG connectors established in accordance with the provisions of subdivision (h).

(d) Equipment and Operation Requirements

(1) LPG transfer at LPG Bulk Loading Facilities

Effective July 1, 2013, an owner/operator of an LPG bulk loading facility shall not transfer, allow the transfer or provide equipment for the transfer of LPG, from any cargo tank to a stationary storage tank located at the facility or from any stationary storage tank to a cargo tank unless all the following conditions are met:

(A) Any railroad tank car or mobile fueler equipped with an LPG vapor recovery or equalization system is maintained and operated according to the specifications of the vapor recovery and equalization system manufacturer;

(B) All vapor return lines and liquid lines are properly connected between the cargo tank and the stationary storage tank so that associated connectors are maintained in a vapor tight and liquid tight condition during LPG transfer; and

(C) The transfer hose assembly, which includes the hose, fittings and gaskets, is properly maintained in order to maintain vapor tight conditions.

(2) LPG transfer at LPG Transfer and Dispensing Facilities

Effective July 1, 2013, an owner/operator of an LPG transfer and dispensing facility shall not transfer LPG from any stationary storage tank, cargo tank, or cylinder into any stationary storage tank, cargo tank, cylinder, portable storage tank, or vehicle fuel tank unless the specific containers meet the following applicable conditions:

(A) The leased or owned stationary storage tank meets one or more of the following conditions:

(i) The stationary storage tank FLLG is closed during LPG transfer, using a filling technique or technology that monitors the maximum fill level to prevent overfilling without use of the FLLG; or

(ii) The stationary storage tank is equipped with a low emission FLLG according to the following schedule:

(I) If the stationary storage tank is either put into or returned to service, it shall be equipped with a low emission FLLG; and

(II) If the stationary storage tank does not meet the provisions of subclause (d)(2)(A)(ii)(I), it shall be equipped with a low emission FLLG by July 1, 2015, or by July 1, 2017 if the owner/operator demonstrates through documentation prior to July 1, 2015 that the stationary storage tank being filled is equipped with an FLLG that cannot be retrofitted with a low emission FLLG in a safe manner without relocation of the stationary storage tank. Documentation shall be made available to the Executive Officer upon request; and

(B) The cargo tank, if equipped with a FLLG, meets one or more of the following conditions:

(i) The cargo tank FLLG is closed while being filled using a filling technique or technology that monitors the maximum fill level to prevent overfilling without use of the FLLG; or

(ii) The cargo tank FLLG is equipped with a low emission FLLG according to the following schedule:

(I) If manufactured on or after July 1, 2013, the cargo tank shall be equipped exclusively with one or more low emission FLLGs; or

(II) The cargo tank shall be equipped exclusively with one or more low emission FLLGs by July 1, 2013, or as soon thereafter at the next service in which the cargo tank is evacuated, but no later than July 1, 2017; and

(C) If the container is a cylinder or portable storage tank, the container shall meet one or more of the following conditions:

(i) The cylinder or portable storage tank FLLG is closed during LPG transfer, using a fill by weight technique or alternative technique or technology that monitors the maximum fill level to prevent overfilling without use of the FLLG; or

(ii) The cylinder or portable storage tank is equipped with a low emission FLLG no later than July 1, 2017; and

(D) Notwithstanding the above effective date of July 1, 2013, the stationary storage tank, cargo tank or cylinder used to transfer or dispense LPG is fitted exclusively with LPG low emission connectors that are maintained in a vapor tight and liquid tight condition, except when actively connecting or disconnecting, after December 31, 2013.

(e) Owner/Operator Leak Detection and Repair Program Requirements

Effective January 1, 2013, the owner/operator of any LPG bulk loading facility or any LPG transfer and dispensing facility that offers LPG for sale to an end user shall:

(1) On a daily basis, physically check all connectors involved with the transfer of LPG for evidence of leakage, such as the presence of odorant, hissing, or staining.

(2) Conduct an inspection as defined in paragraph (c)(9), for any owned or leased stationary storage tank or cargo tank used to supply LPG to any other stationary storage tank or cargo tank once every 90 days, or if the time between fillings is greater than 90 days, during or upon completion of a transfer of LPG.

(3) Conduct a periodic training program for any employee that implements the provisions of paragraph (e)(1) or (e)(2). The training program shall incorporate:

(A) Written training procedures;

(B) The training frequency and the scheduled training dates; and

(C) A written record of the dates of training provided for each employee.

(4) Remove from service any connector which is identified as leaking in accordance with paragraph (e)(1) or (e)(2). The connector shall not be put back into service until the leaky connector is repaired or replaced and inspected. An entry of such leak and repair/replacement activity shall be recorded in accordance with paragraph (f)(1) before the connector is returned to service. The identified leak repaired pursuant to this paragraph shall not constitute a violation of subparagraph (d)(1)(B) and (d)(2)(D).

(f) Recordkeeping Requirements

(1) Effective January 1, 2013, the following records shall be maintained for a period of at least two years and shall be made available to the Executive Officer upon request:

(A) A person who performs the installation of FLLGs or connectors, inspections, as defined by paragraph (c)(9), or repairs connectors at any LPG transfer and dispensing facility or any LPG bulk loading facility, shall provide the owner/operator with all applicable records listed below immediately after service is completed, and the owner/operator shall maintain all provided records:

(i) Records of all FLLGs and connectors installed.

(ii) Service or sales receipts or repair logs confirming follow-up repairs for any leaks identified and repaired in accordance with paragraph (e)(1) and (e)(2), which shall include:

(I) Date and time of each repair;

(II) The name of any person who performed the repair and, if applicable, the name, address and phone number of their employer;

(III) A description of the service performed; and,

(IV) Identification of the FLLG or connector that was installed, repaired, serviced or removed, such as FLLG or connector identification information and FLLG or connector manufacturer name.

(B) The owner/operator of any railroad tank car or mobile fueler equipped with an LPG vapor recovery or equalization system shall maintain records to demonstrate that the system is maintained and operated according to the specifications of the vapor recovery and equalization system manufacturer.

(2) The owner/operator of any LPG transfer and dispensing facility shall maintain and provide to the Executive Officer upon request, documentation that demonstrates that any connector or FLLG used to comply with subdivision (d) meets the definition of LPG low emission connector or low emission FLLG, respectively.

(g) Reporting Requirements

(1) By July 1 of each year from 2014 through 2016, the owner/operator of an LPG bulk loading facility or an LPG transfer and dispensing facility that offers LPG for sale to an end user shall submit an annual report containing the monthly LPG purchase volume and dispensing volume to the Executive Officer for the prior calendar year, in a format approved by the Executive Officer. The reporting facility shall maintain copies of all purchase and sales records used to support the submitted report for a period of at least two years, and make such records available to the Executive Officer upon request.

(2) In lieu of submitting the above annual report, the owner/operator of an LPG transfer and dispensing facility that offers LPG for sale to an end user shall meet all of the following conditions:

(A) Provide that all the facility's LPG suppliers for that prior calendar year include the name of the facility with the supplier's annual report and have the supplier notify the District and the facility by March 1 of the reporting year that the supplier will include the facility in its annual report.

(B) The facility shall maintain copies of all purchase records and notifications from all LPG suppliers for a period of at least two years, and make such records available to the Executive Officer upon request.

(3) By July 1, 2014, the owner/operator of an LPG bulk loading facility shall submit to the Executive Officer an end of year inventory of all facility located LPG low emission connectors, including all LPG low emission connectors installed on facility-owned or leased mobile fuelers associated with the transfer or storage of LPG for calendar year 2013. This inventory shall include the specific storage or transfer equipment or operation involved and the manufacturer and identification or part number of all low emission connectors.

(4) By July 1 of each year from 2014 through 2018, the owner/operator of an LPG bulk loading facility shall submit to the Executive Officer an end of year inventory of all facility located containers, including all facility-owned or leased mobile fuelers associated with the transfer or storage of LPG that are equipped with one or more FLLGs for the prior calendar year. This inventory shall include a summary, by size and classification,

and the associated number of installed low emission FLLGs, submitted in a form approved by the Executive Officer.

(h) Test Method

Measurements of leak concentrations shall be conducted according to the United State Environmental Protection Agency (U.S. EPA) Reference Method 21 using an appropriate analyzer calibrated with methane. The analyzer shall be calibrated before inspection on the day of inspection. For the purposes of this rule, a measurement at or below 10,000 ppm shall be considered to be vapor tight.

(i) Exemptions

(1) The provisions of this rule shall not apply to the transfer of LPG into any container with a water capacity less than four (4) gallons.

(2) The provisions of this rule shall not apply to facilities that are subject to the requirements of Rule 1173 – Control of Volatile Organic Compound Leaks and Releases from Components at Petroleum Facilities and Chemical Plants.

(3) The provisions of subparagraph (d)(2)(C) shall not apply to LPG cylinders that are specifically dedicated for and installed for use with recreational vehicles.

(Adopted December 21, 2001)(Amended April 7, 2006)

RULE 1178. FURTHER REDUCTIONS OF VOC EMISSIONS FROM STORAGE TANKS AT PETROLEUM FACILITIES

(a) Purpose

The purpose of this rule is to further reduce emissions of volatile organic compounds (VOC) from storage tanks located at petroleum facilities.

(b) Applicability

The rule applies to all aboveground storage tanks that have capacity equal to or greater than 75,000 liters (19,815 gallons), are used to store organic liquids with a true vapor pressure greater than 5 mm Hg (0.1 psi) absolute under actual storage conditions, and are located at any petroleum facility that emits more than 40,000 pounds (20 tons) per year of VOC in any emission inventory year starting with the emission inventory year 2000.

(c) Definitions

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

(1) ACCESS HATCH is an opening in the roof with a vertical well and a cover attached to it. Access hatch provides passage for workers and materials through the roof for construction or maintenance.

(2) AMBIENT TEMPERATURE is the temperature of an organic liquid within a storage tank that has been influenced by atmospheric conditions only and is not elevated by a non-atmospheric means of heating at the tank which includes but is not limited to steam, hot water, heaters, heat exchangers, tank insulation, or tank jacketing.

(3) CERTIFIED PERSON is a person who has successfully completed the District tank self-inspection program and a District approved fugitive emissions compliance inspection program, and who holds a certificate issued by the Executive Officer evidencing that such person is in good standing in this program.

(4) CONTINUOUS SEAL is a seal that forms a continuous closure that completely covers the annular space between the wall of the storage vessel and the edge of the floating roof. A continuous seal may be a vapor-mounted, liquid-mounted, or metallic shoe seal. A continuous seal may be constructed of fastened segments so as to form a continuous seal.

(5) DOMED ROOF is a self-supporting fixed roof attached to the top of an external floating roof tank to reduce evaporative losses.

(6) EMISSION CONTROL SYSTEM is a combination of capture system(s) and control equipment used to recover, reduce, remove or control the release of VOC to the atmosphere. Such equipment includes, but is not limited to, absorbers, adsorbers, compressors, condensers, incinerators, flares, boilers, and process heaters.

(7) EMISSION INVENTORY YEAR is the annual emission-reporting period beginning from July 1 of the previous year through June 30 of a given year. For example, emission inventory year 2000 covers the period from July 1, 1999 through June 30, 2000.

(8) EXTERNAL FLOATING ROOF TANK is a storage tank with a roof consisting of a double deck or pontoon single deck which rests or floats on the liquid being contained.

(9) EXEMPT COMPOUNDS are as defined in Rule 102.

(10) FACILITY is any equipment or group of equipment or other VOC-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.

(11) FIXED ROOF SUPPORT COLUMN AND WELL is a column made of round pipe or of structural shape with an irregular cross section that passes through the floating roof via a peripheral vertical well and is used to support the roof of an internal floating roof tank.

(12) FIXED ROOF TANK is a storage tank with a permanently affixed roof.

(13) FUEL GAS SYSTEM is the piping and control system that gathers gaseous stream(s) generated by onsite operations and transports the gaseous stream for sale or for use as fuel gas in combustion devices, or in-process combustion equipment such as furnaces and gas turbines, either singly or in combination.

(14) GAUGE FLOAT is a device that is used to indicate the level of liquid within the tank. The float rests on the liquid surface and is housed inside a well that is closed by a removable cover.

(15) GAUGE HATCH/SAMPLE PORT is an opening in the roof that provides access for gauging or sampling. A gauge hatch/sample port is usually equipped with a closing cover or a funnel and slit-fabric seal to cover the opening.

(16) GUIDEPOLE is an anti-rotation device that is fixed to the top and bottom of the tank, passing through a well that is equipped with a sliding cover. The guidepole is used to prevent adverse movement of the roof and subsequent damage to the roof fittings and rim seals, or as access for level gauging or sampling of the liquid stock. The guidepole can be solid or equipped with slots or holes for gauging purpose.

(17) INTERNAL FLOATING ROOF TANK is a storage tank equipped with a fixed roof and a floating roof which rests on the liquid being contained.

(18) LADDER AND WELL is a ladder that passes through a well, and is used to access the tank bottom of an internal floating roof tank.

(19) LIQUID MOUNTED PRIMARY SEAL is a primary seal that is mounted in full contact with the liquid in the annular space between the tank shell and the floating roof.

(20) MECHANICAL SHOE PRIMARY SEAL is a metallic band attached to the floating roof sliding in contact with the tank shell. The shoes are supported and held against the tank shell by a mechanical device, and are joined together to form a ring. The vapor space between the shoe and the roof is sealed from the atmosphere by a primary seal of coated or VOC impervious fabric.

(21) ORGANIC LIQUID is any liquid containing VOC.

(22) PETROLEUM FACILITY is any facility primarily engaged in the production, refining, storage, transfer or distribution of crude petroleum or petroleum products as defined in the Standard Industrial Classification for crude petroleum and natural gas (SIC code 1311), petroleum refining (SIC code 2911), petroleum bulk stations and terminals (SIC code 5171), or other related industries (e.g., SIC codes 4226, 4612, 4613, 4923 and 5541).

(23) POLE FLOAT is a device located inside a guidepole that floats on the surface of the stored liquid, and is used to indicate the liquid level inside the tank.

(24) POLE SLEEVE is a device that extends from either the cover or the rim of an opening in a floating roof deck to the outer surface of a pole that passes through the opening.

(25) POLE WIPER is a seal that extends from either the cover or the rim of an opening in a floating roof deck to the outer surface of a pole that passes through the opening.

(26) PRESSURE-VACUUM VENT is a vent that is used to minimize tank emissions due to breathing effects.

(27) PRIMARY SEAL is a seal mounted below a secondary seal of a rim seal system that consists of two seals. A primary seal, which is in contact with the floating roof tank shell, can be either mechanical shoe, resilient filled, or wiper type.

(28) RESILIENT FILLED PRIMARY SEAL is an envelope filled with resilient foam (non-metallic polyurethane) mounted at the rim of the floating roof that makes contact with the shell. A resilient filled nonmetallic primary seal can be liquid-mounted or vapor-mounted.

(29) RIM MOUNTED SECONDARY SEAL is a secondary seal mounted on the rim of the floating roof of a storage tank. Rim mounted secondary seals are effective at reducing losses from the primary seal fabric.

(30) RIM SEAL SYSTEM is a closure device between the shell of the storage tank and the floating roof edge. A rim seal system may consist of two seals, one above the other. The lower seal is referred to as the primary seal and the upper seal is referred to as the secondary seal.

(31) RIM VENT is a device consisting of a weighted pallet that rests on a valve seat. Rim vents are used to release any excess pressure or vacuum present in the vapor pocket between the seal and the rim area of a floating roof tank.

(32) ROOF DRAIN is a drain on the roof of a floating roof tank that is used to remove rainwater from the floating roof. There are two types of roof drains. A closed roof drain removes the rainwater from the surface of the roof through a flexible hose through the stored liquid prior to exiting the tank. With a closed roof drain, the rainwater does not come in contact with the liquid stored in the tank. An open roof drain is any drain other than the closed roof drain. An open roof drain is typically used only during an emergency.

(33) ROOF LEG is a device that holds the floating roof at a predetermined distance from the tank bottom to allow for tank cleaning or repair. There are two types of roof legs, adjustable or fixed. Fixed legs are attached to

the floating roof or hangers suspended from the roof, whereas adjustable legs pass through a well or sleeve, and penetrate the roof.

(34) ROOF OPENING is any opening through a floating roof of a storage tank for any roof fitting including but not limited to access hatch, fixed roof support column and well, gauge float, gauge hatch, sample port, guidepole, ladder and well, rim vent, roof drain, roof leg, and vacuum breaker, and excluding rim seal system.

(35) SECONDARY SEAL is a seal mounted above the primary seal of a rim seal system that consists of two seals. Secondary seals can be shoe mounted or rim-mounted.

(36) SHOE MOUNTED SECONDARY SEAL is a secondary seal mounted on the primary mechanical shoe. Shoe mounted secondary seals are effective at reducing vapor losses from the gaps between the shoe and the tank shell.

(37) SLOTTED GUIDEPOLE is a guidepole that has slots or holes through the wall of the guidepole. The slots or holes allow the stored liquid to flow into the pole at liquid levels above the lowest operating level.

(38) STORAGE TANK is a stationary aboveground container that has capacity equal to or greater than 75,000 liters (19,815 gallons) and is used to store organic liquids with a true vapor pressure greater than 5 mm Hg (0.1 psi) absolute under actual storage conditions.

(39) TRUE VAPOR PRESSURE is the vapor pressure of a liquid at actual storage conditions.

(40) VACUUM BREAKER is a device used to equalize the pressure of the vapor space across the deck as the floating roof is either being landed on or floated off its legs. A vacuum breaker consists of a well with a cover. Attached to the underside of the cover is a guided leg long enough to contact the tank bottom as the floating roof is being landed. When in contact with the tank bottom, the guided leg mechanically lifts the cover off the well.

(41) VAPOR MOUNTED PRIMARY SEAL is a primary seal that does not come in contact with the liquid in the annular space between the tank shell and the floating roof.

(42) VAPOR TIGHT CONDITION is a condition that exists when the reading on a portable hydrocarbon analyzer is less than 500 parts per million (ppm), expressed as methane, above background, measured using EPA Reference Method 21.

(43) VISIBLE GAP is a gap of more than 1/8 inch between any gasket or seal and the opening that it is intended to seal. Visible gap for primary and secondary seals is a gap that does not meet the requirements specified in subdivision (d).

(44) VOLATILE ORGANIC COMPOUNDS (VOC) as defined in Rule 102.

(45) WASTE STREAM TANK is a storage tank containing at least 75% water by volume, and some liquid waste stream generated in a manner which contains petroleum liquid, emulsified oil, VOC or other hydrocarbons. For the purpose of this rule, waste stream tanks include waste water tanks and recovered oil (or slop oil) tanks.

(46) WIPER PRIMARY SEAL is a continuous annular blade of flexible material (e.g. rubber, urethane, or foam filled) fastened to a mounting bracket on the deck perimeter that spans the annular rim space and contacts the tank shell. A wiper seal system may consist of a single primary seal, or dual (multiple) seals where one seal is mounted above the other.

(d) Requirements

(1) External Floating Roof Tanks

(A) No later than July 1, 2003, the operator of an external floating roof tank containing organic liquids having true vapor pressure of less than 3 psia at any petroleum facility with annual VOC emissions exceeding 40,000 lbs (20 tons) for emission inventory year 2000 shall:

(i) Equip each access hatch and gauge float well with a cover that is gasketed and bolted. The cover shall be closed at all times, with no visible gaps, except when the hatch or well must be opened for access.

(ii) Equip each gauge hatch/sample well with a cover that is gasketed. The cover shall be closed at all times, with no visible gaps, except when the hatch or well must be opened for access.

(iii) Gasket or cover each adjustable roof leg with a VOC impervious sock at all times when the roof is floating.

(iv) Gasket each rim vent. Rim vents shall be closed at all times, with no visible gaps, when the roof is floating; and

shall be set to open only when the roof is being floated off the roof leg supports or when the pressure beneath the rim seal exceeds the manufacturer's recommended setting.

(v) Gasket each vacuum breaker. Vacuum breakers shall be closed at all times, with no visible gaps, when the roof is floating; and shall be set to open only when the roof is being floated off or is being landed on the roof leg supports.

(vi) Equip each open floating roof drain with a slotted membrane fabric cover or other device with an equivalent control efficiency that covers at least 90 percent of the area of the opening.

(vii) Equip each unslotted guidepole well with a gasketed sliding cover and a flexible fabric sleeve or wiper.

(viii) Equip each unslotted guidepole with a gasketed cover at the end of the pole. The cover shall be closed at all times, with no visible gaps, except when gauging or sampling.

(ix) Equip each slotted guidepole with a gasketed cover, a pole wiper and a pole sleeve. The pole sleeve shall be extended into the stored liquid.

(x) Equip each slotted guidepole having a pole float with a gasketed cover, a pole wiper, and a pole float wiper. The wiper or seal of the pole float shall be at or above the height of the pole wiper.

(xi) Cover each slotted guidepole opening with a gasketed cover at all times, with no visible gaps, except when the cover must be opened for access.

(xii) Maintain the pole float in a condition such that it floats within the guidepole at all times except when it must be removed for sampling or when the tank is empty.

(xiii) Except for vacuum breakers and rim vents, ensure that each opening in the external floating roof shall provide a projection below the liquid surface.

(xiv) Except for vacuum breakers, rim vents, roof drains, and leg sleeves, equip all other openings in the roof with a gasketed cover or seal which is closed at all times, with no visible

gaps, except when the cover or seal must be opened for access.

(B) No later than July 1, 2003, the operator of an external floating roof tank containing organic liquids having true vapor pressure of less than 3 psia at any petroleum facility with annual VOC emissions exceeding 40,000 lbs (20 tons) for emission inventory year 2000 shall equip the tank with a rim seal system meeting the following requirements:

(i) The primary seal shall be a mechanical shoe or liquid mounted.

(ii) The secondary seal shall be rim mounted and shall not be attached to the primary seal.

(iii) 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.

(iv) 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).

(v) Mechanical shoe primary seals 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.

(vi) 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 (d)(1)(B)(iii) for a length of at least 46 centimeters (18 inches) in the vertical plane above the liquid surface.

(vii) The primary seal envelope shall be made available for unobstructed inspection by the Executive Officer along its circumference. In the case of riveted tanks with resilient filled primary 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.

(viii) 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.

(ix) 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.

(x) Except during the preventive maintenance, repair, or inspection periods specified in subdivision (f) and (g) of this rule that do not exceed 72 hours with prior notification to the Executive Officer, both the primary seal and the secondary seal shall cover the annular space between the external floating roof and the wall of the storage tank in a continuous fashion, with no visible gaps.

(xi) The operator shall use a rim seal system that is identified on the current list of seals approved by the Executive Officer. The operator requesting the use of an alternative rim seal system shall submit a written application including emission test results and analysis demonstrating that the alternative rim seal system is better in performance and has a rim seal loss emission factor that is less than or equal to the current design.

(C) No later than July 1, 2003, in lieu of complying with the requirement of no visible gap in subparagraph (d)(1)(A), the operator of an external floating roof tank shall maintain all roof openings in a vapor tight condition at all times except during

preventive maintenance, repair, or inspection periods specified in subdivision (f) and (g) of this rule.

(2) Domed External Floating Roof Tanks

(A) Phase I: The operator at any petroleum facility with annual VOC emissions exceeding 40,000 lbs (20 tons) for emission inventory year 2000 shall install domed roofs on all external floating roof tanks that contain organic liquids having true vapor pressure greater than or equal to 3 psia as reported in the Annual Emissions Report pursuant to Rule 301 - Permit Fees for the emission inventory year 2000 according to the following schedule:

(i) At least 1/3 of the tanks subject to this provision by January 1, 2004;

(ii) At least 2/3 of the tanks subject to this provision by January 1, 2006;

(iii) All tanks subject to this provision by January 1, 2008.

(iv) As an alternative to clauses (i) through (iii) above, an operator may submit a compliance plan demonstrating that 75% of the tanks subject to this provision have domes installed by December 31, 2006, and 100% of such tanks shall have domes installed by December 31, 2008. The Executive Officer shall approve any plan which convincingly demonstrates compliance and may impose conditions of approval necessary to assure compliance. The operator shall comply with all provisions and conditions of an approved plan.

(B) Phase II: For additional external floating roof tanks that are not identified under Phase I but contain organic liquids having true vapor pressure greater than or equal to 3 psia as reported in the Annual Emissions Report pursuant to Rule 301 - Permit Fees for any emission inventory year after 2000, the operator who is subject to Phase I shall comply with the requirements specified in subparagraph (d)(2)(A) no later than two years after becoming subject to the rule. In those cases where the two-year period falls within Phase I, the operator shall complete the installation of the domes on all Phase II tanks by no later than January 1, 2010, or December 31, 2010 if choosing to comply with the alternative in

clause (d)(2)(A)(iv). The applicability and compliance verification of waste stream tanks and recovered oil tanks shall be based on a monthly average true vapor pressure greater than or equal to 3 psia. The monthly average true vapor pressure of waste stream shall be determined based on at least one representative sample or multiple samples collected from the top surface layer that is no deeper than 6 inches at a frequency committed to in writing by the affected facility no later than January 1, 2003. The facility shall monitor and keep records of sampling results and monthly average true vapor pressures on site and make them available to the Executive Officer upon request.

(C) In lieu of complying with the requirements in subparagraph (d)(2)(B), the operator who is subject to Phase I shall accept permit conditions to limit the true vapor pressure of the organic liquids stored in the tanks to lower than 3 psia by the end of Phase I.

(D) The operator of a domed external floating roof tank shall equip and maintain all roof openings in accordance with the specifications listed in subparagraph (d)(1)(A) by the applicable compliance date in subparagraph (d)(2)(A) and (d)(2)(B).

(E) The operator of a domed external floating roof tank shall equip the tank with a rim seal system consisting of a primary and a secondary seal meeting the specifications listed in subparagraph (d)(1)(B) by the applicable compliance date in subparagraphs (d)(2)(A) and (d)(2)(B).

(F) The operator shall ensure that the concentration of organic vapor in the vapor space above a domed external floating roof shall not exceed 30 percent of its lower explosive limit (LEL) by the applicable compliance date in subparagraph (d)(2)(A) and (d)(2)(B).

(G) The operator shall submit to the Executive Officer an annual status report including at a minimum all of the following:

(i) A list of all external floating roof tanks subject to the requirement in subparagraphs (d)(2)(A) and (d)(2)(B);

(ii) A general description of each tank including information such as tank identification, District permit number or District device identification, tank type, tank capacity, type

of liquid stored, and if applicable, number of representative samples, frequency of sampling, averaging method used to determine the monthly average true vapor pressure of waste stream or recovered oil tanks, and the results.

(iii) A compliance status for each tank; and

(iv) An estimated compliance date for each external floating roof tank that is not yet in compliance with the requirement in subparagraph (d)(2)(A) and (d)(2)(B).

(3) Internal Floating Roof Tanks

When an internal floating roof tank is scheduled for emptying and degassing, but no later than January 1, 2007, the operator of an internal floating roof tank at any petroleum facility with annual VOC emissions exceeding 40,000 lbs (20 tons) for emission inventory year 2000 shall:

(A) Equip each fixed roof support column and well with a sliding cover that is gasketed or with flexible fabric sleeves;

(B) Equip each ladder well with a gasketed cover. The cover shall be closed at all times, with no visible gaps, except when the well must be opened for access;

(C) Equip and maintain other roof openings according to the specifications listed in subparagraph (d)(1)(A) or (d)(1)(C);

(D) Equip the tank with a rim seal system consisting of either a primary seal, or a primary and a secondary seal meeting the specifications listed in subparagraph (d)(1)(B), with the exception of a mechanical shoe primary seal which shall have one end extend a minimum vertical distance of 15 centimeters (6 inches) above the liquid surface and the other end extend into the liquid a minimum of 10 centimeters (4 inches); and

(E) Ensure that the concentration of organic vapor in the vapor space above the internal floating roof 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.

(4) Fixed Roof Tanks

(A) No later than January 1, 2007, the operator of a fixed roof tank at any petroleum facility with annual VOC emissions exceeding 40,000 lbs (20 tons) for emission inventory year 2000 shall equip

each fixed roof tank containing organic liquids with true vapor pressure greater than 0.1 psia with an emission control system meeting the following requirements:

(i) The tank emissions are vented to an emission control system with an overall control efficiency of at least 95% by weight or the tank emissions are vented to a fuel gas system.

(ii) Any tank gauging or sampling device on a tank shall be equipped with a vapor tight cover which shall be closed at all times, with no visible gaps, except during gauging or sampling. The roof of such tank shall be properly maintained in a vapor tight condition with no holes, tears or uncovered opening.

(iii) All openings on the roof shall be properly installed and maintained in a vapor tight condition at all times.

(iv) The operator shall equip each fixed roof tank with pressure-vacuum vents that shall be set to the lesser of 10% below the maximum allowable working pressure of the roof or 0.5 psig.

(v) The operator shall maintain pressure-vacuum vents in a vapor tight condition at all times except when the operating pressure of the fixed roof tank exceeds the manufacturer's recommended setting.

(B) In lieu of complying with the requirement in subparagraph (d)(4)(A), the operator may choose to convert the fixed roof tank to an external floating roof tank or an internal floating roof tank meeting the requirements specified in paragraph (d)(1) or (d)(3).

(5) The operator of any petroleum facility with annual VOC emissions exceeding 40,000 lbs (20 tons) for any emission inventory year subsequent to 2000 reporting pursuant to Rule 301 – Permit Fees shall:

(A) Comply with the requirements for external floating roof tanks specified in paragraph (d)(1) no later than one year after becoming subject to this rule.

(B) Comply with the requirements for domed external floating roof tanks specified in paragraph (d)(2) no later than six years after becoming subject to this rule. Any external floating roof tank that

later becomes subject to this requirement based on any subsequent emission inventory year, shall comply with the requirements in paragraph (d)(2) no later than two years after becoming subject to this rule.

(C) Comply with the requirements for internal floating roof tanks specified in paragraph (d)(3) when the tanks are scheduled for emptying and degassing, but no later than five years after becoming subject to this rule.

(D) Comply with the requirements for fixed roof tanks specified in paragraph (d)(4) no later than five years after becoming subject to this rule.

(6) The operator of all tanks for which a permit to construct and operate has been issued by the Executive Officer on and after January 1, 2002 for new construction shall comply with the requirements of subdivision (d).

(e) Identification Requirements

(1) The operator shall permanently identify all tanks subject to the requirements of this rule by a visible sign that includes the tank number, on the outside wall of the tank for inventory, inspection and record keeping purposes.

(2) The operator shall notify the Executive Officer of any change(s) in tank identification.

(f) Monitoring Requirements

(1) External Floating Roof Tanks

To demonstrate compliance with paragraph (d)(1), the operator shall have a certified person conduct the following in accordance with the procedures and guidelines specified in Attachment A:

(A) Conduct an EPA Method 21 inspection or measure gaps of all roof openings on a semiannual basis and each time the tank is emptied and degassed.

(B) Perform complete gap measurements of the rim seal system on a semiannual basis and each time the tank is emptied and degassed.

(2) Domed External Floating Roof Tanks and Internal Floating Roof Tanks

To demonstrate compliance with paragraph (d)(2) and (d)(3), the operator shall have a certified person conduct the following in accordance with the procedures and guidelines specified in Attachment A:

(A) Visually inspect the rim seal system and roof openings and use an explosimeter to measure the lower explosive limit (LEL) on a semiannual basis.

(B) Perform complete gap measurements of the rim seal system each time the tank is emptied and degassed but no less than once every ten years.

(C) Perform complete gap measurements of all roof openings each time the tank is emptied and degassed but no less than once every ten years.

(3) Fixed Roof Tanks

(A) No later than 180 days after the effective date of the requirements, the operator of a facility who elects to install an emission control system to comply with the requirements in clause (d)(4)(A)(i) shall conduct an initial performance testing to determine the overall efficiency of the emission control system and submit a complete test report to the Executive Officer. The performance testing of the emission control system shall be repeated when the system is modified or an operating parameter is changed in a manner that affects the capture or control efficiency. In such case, the performance test shall be conducted and the test report submitted to the Executive Officer within 180 days after the modification. Subsequent to the initial performance test, the operator shall conduct annual performance tests, and shall monitor and record applicable operating parameters on a weekly basis to ensure that the emission control system is achieving 95% overall control efficiency.

(B) To demonstrate compliance with clause (d)(4)(A)(ii), (d)(4)(A)(iii) and (d)(4)(A)(v), the operator shall have a certified person conduct EPA Method 21 measurements on a quarterly basis.

(C) To demonstrate compliance with clause (d)(4)(A)(iv), the operator shall keep engineering data sheet for pressure-vacuum vents installed after January 1, 2002.

(g) Maintenance Requirements

The operator shall repair, or replace any piping, valves, vents, seals, gaskets, or covers of roof openings that are found to have defects or visible gaps, or are not vapor tight, and do not meet all the requirements of this rule before filling or refilling an emptied and degassed storage tank, or within 72 hours after any operator inspection specified in subdivision (f).

(h) Record Keeping and Reporting Requirements

(1) During the inspections specified subdivision (f), the operator shall keep records of all findings, including but not limited to the readings measured according to EPA Reference Test Method 21.

(2) The operator shall record all inspections of primary, secondary seals, and roof openings on compliance inspection report forms approved by the Executive Officer as described in Attachment A.

(3) The operator shall submit all inspection reports and documents to the Executive Officer semiannually within five working days of completion of the inspections specified in paragraph (f)(1) and (f)(2); and within thirty working days of completion of two consecutive quarterly inspections specified in paragraph (f)(3).

(4) If the operator determines that a tank is in violation of the requirements of this rule during the inspections specified subdivision (f), the operator shall submit a written report to the Executive Officer within 120 hours of the determination of non-compliance, indicating corrective actions taken to achieve compliance.

(5) The operator who elects to install or modify an emission control system to comply with the requirement in clause (d)(4)(A)(i) shall conduct an initial performance test as described in clause (f)(3)(A) and submit a complete test report to the Executive Officer no later than 180 days after the effective date of the requirement for new installation; or 180 days after the modification. Subsequent annual performance test and test report shall be submitted annually within 60 days after the end of each emission inventory year.

(6) The operator shall keep all monitoring, inspection, maintenance, and repair records at the facility for a period of five years and shall make the records available to the Executive Officer upon request.

(i) Test Methods and Procedures

The following test methods and procedures shall be used to determine compliance with this rule. Alternative test methods may be used if they are determined to be equivalent and approved in writing by the Executive Officer, the California Air Resources Board, and the U.S. Environmental Protection Agency.

(1) Measurements of gaseous volatile organic compound leaks shall be conducted according to EPA Reference Method 21 using an appropriate analyzer calibrated with methane.

(2) Organic liquids that are stored at ambient temperatures with a true vapor pressure of greater than 5 mm Hg (0.1 psi) absolute under actual storage conditions shall be determined as those with a flash point of less than 100 °F as determined by ASTM Method D-93.

(3) Organic liquids that are stored at above ambient temperatures with a true vapor pressure greater than 5 mm Hg (0.1 psi) absolute under actual storage conditions shall be determined as those whose volume percent evaporated is greater than ten percent at an adjusted temperature T_{Adj} as determined by ASTM Method D-86 of:

$$T_{Adj} = 300\ ^{o}F + T_l - T_a$$

Where:

T_l = Liquid Storage Temperature (^{o}F)

T_a = Ambient Temperature (^{o}F) = 70 ^{o}F

(4) Organic liquids with a true vapor pressure of greater than or equal to 3 psia shall be determined by ASTM Method D-323 for Reid vapor pressure and converted to true vapor pressure using applicable nomographs in EPA AP-42 or District and EPA approved nomographs. The actual storage temperature used for determining true vapor pressure shall be 70 degrees Fahrenheit for organic liquids that are stored at ambient temperatures, and actual storage temperature for organic liquids that are stored at above ambient temperatures.

(5) Control efficiency of an emission control system, on a mass emissions basis, and the VOC concentrations in the exhaust gases shall be determined by U.S. EPA Test Methods 25, 25A; District Method 25.1 - Determination of Total Gaseous Non-Methane Organic Emissions as Carbon; or District Method 25.3 – Determination of Low Concentration

Non-Methane Non-Ethane Organic Compound Emissions from Clean Fueled Combustion Sources, as applicable.

(6) 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 Executive Officer. In addition, 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.

(7) The sampling, analysis, and reporting shall be conducted by a laboratory that has been approved under the District Laboratory Approval Program (LAP) for the cited District reference test methods, where LAP approval is available. For District reference test methods for which no LAP program is available, the LAP approval requirement shall become effective one year after the date that the LAP program becomes available for that District reference test method.

(8) Tests to determine emission factors for an alternative control device for rim seal or deck opening shall accurately simulate conditions under which the device will operate, such as wind, temperature, and barometric pressure. Test methods that can be used to perform the testing required in this paragraph include, but are not limited to, the following methods, which shall be performed by a laboratory certified by American Petroleum Institute (API):

(A) API Manual of Petroleum Measurement Standards, Chapter 19, Section 3, Part A, Wind Tunnel Test Method for the Measurement of Deck-Fitting Loss Factors for External Floating-Roof Tanks;

(B) API Manual of Petroleum Measurement Standards, Chapter 19, Section 3, Part B, Air Concentration Test Method for the Measurement of Rim Seal Loss Factors for Floating-Roof Tanks.

(C) API Manual of Petroleum Measurement Standards, Chapter 19, Section 3, Part E; Weight Loss Test Method for the Measurement of Deck-Fitting Loss Factors for Internal Floating-Roof Tanks.

(j) Exemptions

(1) The provisions of this rule shall not apply to pressurized storage tanks designed to operate in excess of 15 pounds per square inch gauge (psig)

without any emissions to the atmosphere except under emergency conditions.

(2) Domed external floating roof tanks installed prior to January 1, 2002 shall be exempt from the requirements of subparagraph (d)(2)(D) and (d)(2)(E) for secondary seals.

(3) Any facility with a facility emission cap equal to or less than 40,000 pounds (20 tons) per year of VOC shall be exempt from the requirements of this rule.

(4) Portable Baker tanks containing organic liquids having true vapor pressures from 0.1 psia to 0.5 psia equipped with carbon canisters to reduce the emissions from the storage tanks to less than 500 ppm outlet concentration shall be exempt from the performance testing requirements specified in clause (d)(4)(A)(i) and subparagraph (f)(3)(A) provided that the operator conducts EPA Reference Method 21 measurement weekly to ensure that the system achieves the emission standard of 500 ppm.

(5) External floating roof tanks having permit conditions that limit the true vapor pressure of the organic liquids stored in the tanks to lower than 3 psia shall be exempt from the requirements of paragraph (d)(2).

(6) External floating roof tanks subject to clause (d)(1)(A)(i) shall be exempt from this requirement until the next time the tank is emptied and degassed, provided that the operator has demonstrated to the satisfaction of the Executive Officer that in order to properly bolt, the covers for access hatches and gauge float wells must be welded. The operator shall use equivalent means, such as clamping, to secure the covers during the interim period.

(7) External floating roof tanks permitted to contain more than 97% by volume crude oil shall be exempt from the doming requirements of paragraph (d)(2)(A) and (d)(2)(B) but shall comply with other remaining applicable requirements of this rule.

ATTACHMENT A

INSPECTION PROCEDURES AND COMPLIANCE REPORT FORMS

Equipment Needed:

Organic Vapor Analyzer (OVA) calibrated with methane in accordance with EPA Test Method 21, explosimeter calibrated with methane (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 1178 Compliance Report forms 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 the 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:
   - o 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.
   - o 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.
   - o Conduct an inspection of the roof fittings for vapor tight condition and record any leaks above 500 ppm in the fugitive emissions tank report OR conduct an inspection of the roof fittings using the 1/8" probes.

- o 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.
- o 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.
- o 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 and domed tanks:
   - o 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.
   - o Conduct a visual inspection of the roof openings and the secondary seal, if applicable, and record findings on the report .
   - o Conduct gap measurements of the rim seal system and roof openings each time the tank is emptied and degassed but no less than once every ten years.

6. For fixed roof tanks:
   - o Conduct an inspection of the pressure relief valves, piping, valves and fittings located on the roof for vapor tight condition and record any readings in excess of 500 ppm in the fugitive emissions tank report.

7. Complete all necessary calculations and record all required data accordingly on the report.

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
RULE 1178 COMPLIANCE REPORT

PLEASE COMPLETE FORM LEGIBLY IN BLACK INK

Tank No. _____ SCAQMD Permit No. _____ Inspection Date _____ Time _____

Is This a Follow-up Inspection? No ☐ Yes ☐ If yes, Date of Previous Inspection _____

A. COMPANY INFORMATION:

Company Name _____

Location Address _____ City _____ Zip _____

Mailing Address _____ City _____ Zip _____

Contact Person _____ Title _____

Phone _____

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 _____

Type of Tank: Riveted ☐ Welded ☐ Other ☐ (describe) _____

Color of Shell _____ Color of Roof _____

Roof Type: Pontoon ☐ Double Deck ☐ Other(describe) _____

External floating roof ☐ Internal floating roof or domed tank ☐

D. GROUND LEVEL INSPECTION:

1) Product Temperature _____ ° F 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 OR DOMED TANK:

1) Check vapor space between floating roof and fixed roof with explosimeter. _____ % 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 (or DOMED TANK AND INTERNAL FLOATING ROOF TANK when needed)

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 gap 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: ☐ Shoe; ☐ Tube; ☐ 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" _____

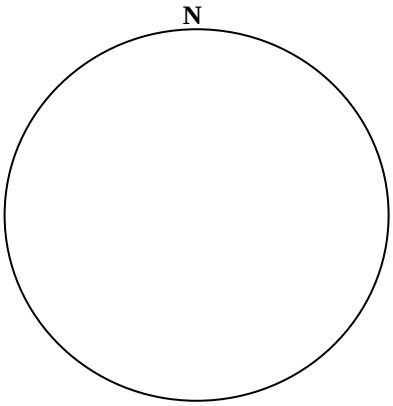
>1-1/2" _____ *NOTE: Record the actual width and cumulative length of gaps in feet and inches.*

(Do not include gaps > 1/2" in 1/8" measurements, or gaps > 1-1/2" in 1/2" measurements)

6) Deck Fitting Inspection

(circle one) does 1/8" probe drop past gasket seal or pass Method 21? No ☐ Yes ☐ if yes, identify

NOTE: Show defects using symbols. Show seal gaps and lengths.



LEGEND:

Equipment:

	Antirotational device
	Gauge well
⊤	Leg stand
	Roof drain
*	Emergency roof drain
∞	Vacuum breaker
	Vent
	Platform & ladder

Defects:

	Leg top
╫	Leg pin
	Open hatch
\/\	Torn seal
|-P-|	Primary seal gap
|-S-|	Secondary seal gap

Tank No. _____ SCAQMD Permit No. _____

IF INTERNAL FLOATING ROOF OR DOMED TANK, PROCEED TO PART H(6) WHEN APPROPRIATE:

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 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:

1)	Were any openings found on the roof?		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		
		Did cumulative 1/8 - 1/2” gap exceed 60% circumference length?	No ☐	Yes ☐
		Did any <u>single continuous</u> 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) or domed tank 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 (both sheets) TO:

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
21865 E. Copley Drive
Diamond Bar, CA. 91765 FAX: (909)396 -3341
Attn: Rule 1178 Supervising Inspector

FOR SCAQMD USE ONLY: Date received_____

Reviewed by:_____ Date reviewed_____
(signature) (Certification ID #)

Tank Status: [ ] in compliance [ ] in violation, Rule(s)_____
Comments:_____

_____

_____

_____

South Coast Air Quality Management District
21865 East Copley Drive
Diamond Bar, CA 91765
(909) 396-2000

RULE 1178 FUGITIVE EMISSIONS TANK REPORT

Company Information							
Company Name							
Address							
Contact/Phone Number							
SCAQMD ID #				Report Date			
Tank ID	**Type**	**Fitting**	**Date**	**Leak Rate**	**Type of Repair**	**Date**	**Post Repair Leak Rate**

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

(Adopted June 7, 1991)(Amended March 6, 1992)

RULE 1179. PUBLICLY OWNED TREATMENT WORKS OPERATIONS

(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).

(Adopted February 14, 1997)(Amended December 11, 1998)
(Amended September 10, 1999)(Amended April 2, 2004)
(Amended July 11, 2008)

RULE 1186. PM_{10} EMISSIONS FROM PAVED AND UNPAVED ROADS, AND LIVESTOCK OPERATIONS

(a) Purpose

The purpose of this rule is to reduce the amount of particulate matter entrained in the ambient air as a result of vehicular travel on paved and unpaved public roads, and at livestock operations.

(b) Applicability

The provisions of this rule shall apply to specified land uses and activities conducted within the South Coast Air Quality Management District which result in fugitive dust.

(c) Definitions

(1) AVERAGE DAILY TRIPS (ADT) means the average number of vehicles that cross a given surface during a specified 24-hour time period as determined by the most recent Institute of Transportation Engineers trip generation manual, tube counts, or observations.

(2) CERTIFIED STREET SWEEPER is a sweeper that has been certified by the District as meeting the Rule 1186 sweeper certification procedures and requirements for PM_{10}-efficient sweepers.

(3) CHEMICAL STABILIZERS mean 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 U.S. Environmental Protection Agency (U.S. EPA), or any applicable law, rule or regulation. The chemical stabilizers shall 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.

(4) CHEMICAL STABILIZATION means a method of dust control implemented by a person to mitigate fugitive dust and corresponding PM_{10} emissions which involves the use of non-toxic chemical stabilizers in sufficient quantities to maintain a stabilized surface.

(5) CONTRACT DATE is the date the contract has been signed by both parties but no earlier than 6 months before sweeping begins. Renewals of sweeping contracts are considered new contracts.

(6) DISTRICT'S TEST PROTOCOL: RULE 1186 CERTIFIED STREET SWEEPER COMPLIANCE TESTING means the reference test method contained in Appendix A, or hereafter approved by the Executive Officer and the U.S. Environmental Protection Agency to be an equivalent method.

(7) DUST SUPPRESSANTS are water, hygroscopic materials, or non-toxic chemical stabilizers used as a treatment material to reduce fugitive dust emissions.

(8) ESSENTIAL PUBLIC SERVICES are sewage treatment facilities, prisons, police facilities, fire fighting facilities, schools, hospitals, landfills, and water delivery operations.

(9) FEED LANE ACCESS AREAS are roads providing access from the feed preparation areas to and including feed lane areas at a livestock operation. These access roads are typically used to distribute feed from feed trucks to the animals.

(10) 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.

(11) INDEPENDENT TESTING FACILITY (OR LABORATORY) means a testing facility that meets the requirements of District Rule 304, subdivision (k) and is approved by the District to conduct certification testing under the District's Test Protocol: RULE 1186 Certified Street Sweeper Compliance Testing.

(12) LIVESTOCK OPERATIONS means any operation directly related to the raising of more than 50 animals for the primary purpose of making a profit or for a livelihood.

(13) OWNER/OPERATOR is any person who owns, leases, or operates a land use or activity subject to the requirements of this rule.

(14) PAVED ROAD means a public or private improved street, highway, alley, public way, or easement that is covered by typical roadway materials, but excluding access roadways that connect a facility with a public paved roadway 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.

(15) PM_{10} is particulate matter with an aerodynamic diameter smaller than or equal to 10 microns as measured by the applicable State and Federal reference test methods.

(16) PURCHASE OR LEASE DATE is the date the purchase or lease contract for delivery of sweeping equipment has been signed by both parties. Renewals of leasing contracts are considered new leases.

(17) ROUTINE STREET SWEEPING is street sweeping performed by local governments or their contractors at least once every three months for a given paved road.

(18) SOUTH COAST AIR BASIN means the non-desert portions of Los Angeles, Riverside, and San Bernardino counties and all of Orange County as defined in California Code of Regulations, Title 17, Section 60104. The area is bounded on the west by the Pacific Ocean, on the north and east by the San Gabriel, San Bernardino, and San Jacinto Mountains, and on the south by the San Diego county line.

(19) STABILIZED SURFACE means 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.

(20) STREET CLEANING means the removal of post-event visible roadway accumulations using street sweeping equipment, front end loaders, haul vehicles, manual shoveling, street flushing, or any other methods determined effective by the responsible agency.

(21) TYPICAL ROADWAY MATERIALS means concrete, asphaltic concrete, recycled asphalt, asphalt or any other material of equivalent performance as determined by the Executive Officer, the California Air Resources Board, and the U.S. EPA.

(22) UNPAVED ACCESS CONNECTIONS means any unpaved road connection with a paved public road.

(23) UNPAVED ALLEY means any roadway not exceeding 25 feet in width, which is primarily used for access to the rear or side entrances of abutting property, and that is not covered by typical roadway materials.

(24) UNPAVED ROADS are any unsealed or unpaved roads, equipment paths, or travel ways that are not covered by typical roadway materials. Public unpaved

roads are any unpaved roadway owned by federal, state, county, municipal or other governmental or quasi-governmental agencies. Private unpaved roads are all unpaved roadways not defined as public. This definition excludes horse trails, hiking paths, bicycle paths, or other similar pathways used exclusively for purposes other than travel by motorized vehicles.

(25) VISIBLE ROADWAY ACCUMULATIONS means the deposit of particulate matter onto paved roads as a result of wind or water erosion, haul vehicle spillage, or any other event excluding vehicular track-out, which results in the accumulation of visible roadway dust covering a contiguous area in excess of 200 square feet.

(26) WIND-DRIVEN FUGITIVE DUST means visible emissions from any disturbed surface area which is generated by wind action alone.

(d) Requirements

Paved Roads

(1) Any owner or operator of a paved public road on which there is visible roadway accumulations shall begin removal of such material through street cleaning within 72 hours of any notification of the accumulation and shall completely remove such material as soon as feasible. If removal cannot be completed within 10 days of notification, the owner/operator shall notify the Executive Officer and provide information on the location of the accumulation(s) and estimated removal completion date.

(2) Any government or government agency which contracts to acquire street sweeping equipment or street sweeping services for routine street sweeping on public roads that it owns and/or maintains, shall acquire or use only certified street sweeping equipment.

(3) Any government or government agency subject to the requirements of paragraph (d)(2) and/or its contractors shall operate and maintain the certified street sweeping equipment in accordance with the manufacturer's specifications. The use of parts determined by the Executive Officer to be substantially similar under the provisions of paragraph (f)(4) shall not be deemed a violation of this subparagraph.

(4) Beginning January 1, 2006, any owner or operator of a public or private paved road shall construct, or require to be constructed, all new or widened paved roads in accordance with the American Association of State Highway and Transportation Officials (AASHTO) guidelines or the applicable equivalent

locally adopted guidelines for curbing, width of shoulders, and medians as specified below:

(A) New construction or widening of paved roads with projected average daily trips of 500 vehicles or more shall be constructed with curbs or as an alternative paved outside shoulders using typical roadway materials and having the following minimum widths:

Average Daily Trips	Minimum Shoulder Width
500 - 3,000	4 feet
3,000 or greater	8 feet

(B) New construction or widening of paved roads with medians and projected average daily trips of 500 vehicles or more shall pave the median area with typical roadway materials unless:

(i) the speed limits are set at or below 45 miles per hour; or

(ii) the medians are landscaped and maintained with grass or other vegetative ground cover and are surrounded by curbing; or

(iii) the medians are treated with chemical stabilizers in sufficient quantity and frequency to establish a stabilized surface and are surrounded by curbing.

Unpaved Roads

(5) Any owner or operator of an unpaved public road in the South Coast Air Basin shall annually treat unpaved roads that have greater than the average ADT of all unpaved roads in its jurisdiction (as determined by the owner/operator) beginning January 1, 1998 and each of the 8 calendar years thereafter by either:

(A) Paving at least 1 mile of such roads using typical roadway materials; or

(B) Applying chemical stabilization to 2 miles of such roads in sufficient quantities to maintain a stabilized surface; or

(C) Taking one or more of the following actions on 3 miles of such roads:

(i) Installing signage at 1/4 mile intervals that prohibits vehicular speeds in excess of 15 miles per hour (mph) as authorized by California Vehicle Code section 22365 and/or

(ii) Installing speed control devices (e.g., speed bumps) every 500 feet and/or

(iii) Maintaining the roadway in such a manner that inhibits vehicular speeds in excess of 15 mph.

(Note: Treatment in excess of the annual requirement can be credited toward future year requirements.)

Livestock Operations

(6) Any owner or operator of a livestock operation shall cease all hay grinding activities between 2:00 and 5:00 p.m. each day, if visible emissions extend more than 50 feet from a hay grinding source.

(7) Any owner or operator of a livestock operation shall treat all unpaved access connections and unpaved feed lane access areas with either pavement, gravel (maintained to a depth of four inches), or asphaltic road-base no later than January 1, 1998.

(e) Street Sweeper Testing and Certification Procedures

(1) Any manufacturer seeking certification of street sweeping equipment as a certified street sweeper shall utilize the following procedures;

(A) The manufacturer shall submit a signed and dated certification request to the Executive Officer, and attest to the accuracy of all statements therein, that shall include:

(i) the name and address of the manufacturer, the brand name, the model number, and a complete description of the sweeper's dust collection and suppression system by submitting all of the information in paragraph (f)(2); and

(ii) confirmation that the specific sweeper configuration to be certified has been tested in accordance with District's Test Protocol: Rule 1186 Certified Street Sweeper Compliance Testing by an independent test facility or laboratory, and that test results demonstrate that the sweeper meets the Rule 1186 sweeper certification limits specified in paragraph (e)(2).

(B) Manufacturers of certified street sweeping equipment may submit a certification request for additional equipment that has substantially similar material collection and dust suppression system(s) as equipment that was certified under the provisions of paragraph (e)(2), by providing the information specified in clause (e)(1)(A)(i). If the Executive Officer determines that the information submitted by the manufacturers in

support of an equivalency determination and previous certification test results are sufficient to certify the additional equipment, the Executive Officer will approve the request.

(2) The Executive Officer will certify street sweeping equipment provided such equipment meets the following conditions based on a single certification test:

(A) The pick-up efficiency, as defined in the District's Test Protocol: Rule 1186 Certified Street Sweeper Compliance Testing, is greater or equal to 80 percent; and

(B) The normalized mass of entrained PM_{10}, as defined by District's Test Protocol: Rule 1186 Certified Street Sweeper Compliance Testing, is less than or equal to 200 mg/m.

(f) Street Sweeper Performance Characteristics

(1) Any manufacturer of a street sweeper that has previously been certified under the provisions of subdivision (e) shall, no later than November 11, 2008, submit to the Executive Officer a complete description of the dust collection and suppression systems of the equipment as configured during the certification testing or as otherwise certified under the provisions of subparagraph (e)(1)(B).

(2) The description of the dust collection and suppression systems required under paragraph (f)(1) shall, at a minimum, consist of the following:

(A) Dust collection

(i) Gutter broom

(I) material composition;

(II) bristle count and weight;

(III) tensile strength expressed as pounds per square inch (PSI); and

(IV) dimensions including length, thickness, and width.

(ii) Main pickup broom (if part of the original certified street sweeper)

(I) material composition and pounds of fiber per broom;

(II) tensile strength expressed as PSI; and

(III) dimensions including length, thickness, and width.

(iii) Blower/Vacuum system (if part of the original certified street sweeper)

(I) horsepower; and

(II) drive type.

(B) Dust suppression

(i) Water suppression

(I) schematic drawing showing water nozzle locations and orifice nozzle sizes; and

(II) minimum system relief valve setting for water pump expressed as pounds per square inch (PSI).

(ii) Filter-based suppression

(I) filter media type and surface area; and

(II) filtration cleansing system, including mechanism and frequency.

(3) Any manufacturer of street sweeping equipment shall notify the Executive Officer through submission of a plan regarding any change to a part specification or part supplier submitted pursuant to paragraph (f)(2). Street sweeping manufacturers shall be required to submit sufficient specifications and other data as determined by the Executive Officer to demonstrate that the equipment performance has not been affected by the change of a part specification or part supplier prior to the continued distribution of equipment as a certified street sweeper. In the event the Executive Officer determines that the certification of performance is not maintained, the manufacturer shall lose equipment certification for the specific street sweeper.

(4) Any street sweeper parts supplier may sell parts to an entity required to procure certified street sweeping equipment provided that:

(A) such parts were installed on equipment that was certified under the provisions of subdivision (e). Documentation that a given part was on a street sweeper during certification testing must be submitted to the Executive Officer as a plan and must include the following:

(i) Invoices from the parts supplier to the manufacturer, or

(ii) Contractual agreements between the parts supplier to the manufacturer, or

(iii) Any other documentation that the Executive Officers deems sufficient to demonstrate that a given part was on a piece of equipment that was previously certified; or

(B) the supplier submits a plan that demonstrates to the satisfaction of the Executive Officer that the replacement part is substantially similar to the original equipment manufacturer part.

(5) Any person subject to the plan submittal requirements under paragraphs (f)(3) or (f)(4) shall be assessed applicable filing and evaluation fees pursuant to Rule 306 (Plan Fees).

(6) Any plan submitted under the requirements under paragraphs (f)(3) or (f)(4) shall be either approved, conditionally approved or disapproved in writing by the Executive Officer within 120 days of the receipt of a complete plan.

(g) Recordkeeping

(1) Any person subject to paragraph (d)(3) shall maintain operational and maintenance records demonstrating compliance with paragraph (d)(3). Such records for the previous two years of operation (or total period of operation, if less than two years) must be made available to the Executive Officer upon request.

(2) Any person subject to paragraph (d)(5) shall maintain records that document compliance with the requirements specified in paragraph (d)(5). Such records must be updated annually and must be made available to the Executive Officer upon request.

(h) Exemptions

(1) The provisions of this rule shall not apply to essential public services that are in compliance with District Rule 403 (Fugitive Dust).

(2) The provisions of paragraph (d)(1) shall not apply to:

(A) visible roadway accumulations that occur on roads with fewer than 500 average daily trips.

(B) paved roads that have been closed until such time that the road is again opened to vehicular activity.

(C) events of such magnitude that a State of Emergency has been declared by the Governor, provided that removal of visible roadway accumulations associated with such events are initiated and completed as soon as feasible.

(3) The provisions of paragraph (d)(5) shall not apply to:

(A) any unpaved road 3,000 feet above mean sea level with fewer than 500 ADT.

(B) any unpaved road used for emergency fire or flood protection or emergency maintenance of essential service utilities to provide electricity, natural gas, telephone, water, and sewer.

(C) any unpaved public road where public access is prohibited.

(D) any unpaved alley.

(E) any government agency if it:

(i) notifies the Executive Officer that it has less than 5 miles of unpaved road mileage and implements once at least one of the control strategies identified in either subparagraph (d)(5)(A) or (d)(5)(B) or (d)(5)(C) on the unpaved road mileage with greater than the average ADT (as determined by the owner/operator) by January 1, 2000; or

(ii) notifies the Executive Officer that it has more than 5 but less than 10 miles of unpaved road mileage and implements at least one of the control strategies identified in either subparagraph (d)(5)(A) or (d)(5)(B) or (d)(5)(C) on unpaved roads with greater than the average ADT (as determined by the owner/operator) in each three year period beginning January 1, 1998 (with final treatments completed by December 31, 2005); or

(iii) notifies the Executive Officer that all of its remaining unpaved roads have 20 ADT or less (as determined by the owner/operator).

(4) The provisions of paragraphs (d)(6) and (d)(7) shall not apply to livestock operations whose contiguous bounded areas do not exceed ten acres.

(5) The provisions of subparagraph (d)(4)(A) shall not apply to unpaved road shoulders provided that the area extending eight feet from the outside edge of the pavement is landscaped and maintained with grass or other vegetative ground cover.

(i) Alternative Control Options

In lieu of complying with the provisions of paragraphs (d)(5) and (d)(7), a person may submit for approval by the Executive Officer and the U.S. Environmental Protection Agency a plan for achieving equivalent emissions reductions through alternative control measures.

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

(Adopted January 21, 2000)

RULE 1189. EMISSIONS FROM HYDROGEN PLANT PROCESS VENTS

(a) Purpose and Applicability

The purpose of this rule is to reduce emissions of volatile organic compounds (VOCs) from hydrogen plant process vents. The rule applies to all hydrogen plants that produce any hydrogen for use in petroleum refining operations.

(b) Definitions

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

1. **EXISTING HYDROGEN PLANT** is a hydrogen plant that is not a new or reconstructed hydrogen plant.
2. **HYDROGEN PLANT** is a facility that produces hydrogen with steam hydrocarbon reforming, partial oxidation of hydrocarbons, or other processes. Hydrogen plants include steam reforming or hydrogen generation reactors, shift conversion reactors, gas purification or separation units, condensate deaerators or degassifiers, steam generators, direct or indirect contact cooling systems, and their associated systems including the units used to recover carbon dioxide from the vent gas. Hydrogen plants do not include refinery process units, such as catalytic reforming and isomerization units, where hydrogen is produced as a byproduct, provided that all gaseous streams are vented to closed systems except for safety relief devices.
3. **NEW OR RECONSTRUCTED HYDROGEN PLANT** is a hydrogen plant for which a permit to construct is issued or, if construction has not begun, an extension to the permit to construct is granted on or after January 21, 2000. A hydrogen plant shall be considered as "reconstructed" if the fixed capital cost of the alteration exceeds 50 percent of the fixed capital cost that would be required to construct a comparable new plant.
4. **PETROLEUM REFINING** is a process by which gasoline, kerosene, distillate fuel oils, residual fuel oils, or lubricants are produced, through fractionation or straight distillation of crude oil, redistillation of unfinished petroleum derivatives, cracking or other processes, as defined in the Standard Industrial Classification Manual as Industry No. 2911, Petroleum Refining.
5. **PROCESS VENT** is an opening where a gas stream is continuously or periodically discharged during normal operation of a hydrogen plant. Process vents include openings where gas streams are discharged directly to the atmosphere, or are discharged to the atmosphere after being routed to a control device or a product recovery device. Process vents do not include any exhaust stack from a process heater or furnace to which a hydrogen plant vent stream may be directed, provided that the vent stream is introduced into a location where the vent stream will be exposed to a minimum temperature of 1,400 degrees F for at least one second, and that the combustion device has been issued a valid permit by the Executive Officer in accordance with all District rules applicable to the device.
6. **THIRD-PARTY FACILITY** is a carbon dioxide recovery facility owned and operated by a person (or persons under common control) other than the operator of the hydrogen plant.

(c) Requirements for Existing Hydrogen Plants

1. On or before July 1, 2000, the operator of an existing hydrogen plant shall conduct initial source

testing in accordance with the test methods listed in subdivision (f) to determine the emission rate of the plant and submit a complete test report to the Executive Officer. Notwithstanding the above, the initial source testing and reporting for an existing hydrogen plant that has been placed out of operation for more than one year as of January 21, 2000, shall be conducted within six months of startup of the plant.

2. On or after July 1, 2001, an operator shall not operate any existing hydrogen plant, unless the plant complies with one of the following:
   A. The total VOC emissions from all process vents of the plant combined are less than 2.5 pounds of VOC per million standard cubic feet of hydrogen produced as determined by test methods listed in subdivision (f); or
   B. The total VOC content in the process condensate is reduced by at least 80 percent from the baseline levels determined by the initial source testing pursuant to paragraph (c) (1). The total VOC content in the process condensate shall be determined in ppm VOC as carbon by weight using the condensate trap analysis of District Method 25.3. Representative samples of process condensate shall be collected downstream of the cooler following the final shift reactor or at the inlet to the deareator, as appropriate; or
   C. The low temperature shift reactor of the hydrogen plant is equipped and operating exclusively with a low-methanol generating catalyst for which the operator demonstrates compliance by submitting to the Executive Officer, prior to July 1, 2001, the following:
      i. A bill of sale indicating the catalyst type and manufacturer.
      ii. A written statement that the catalyst has been installed and is in operation.
      iii. Catalyst manufacturer's pilot study data or other supporting document verifying that, under the representative operating conditions of the hydrogen plant, the catalyst produces at least 80 percent less methanol over the catalyst's life cycle, when compared with the conventional catalyst supplied by the manufacturer.
3. On or after January 1, 2003, an operator shall not operate any existing hydrogen plant, unless the total VOC emissions from all process vents of the plant combined are less than 2.5 pounds of VOC per million standard cubic feet of hydrogen produced as determined by test methods listed in subdivision (f). Notwithstanding the above, the compliance date may be extended to July 1, 2003, provided that the operator submits a written statement to the Executive Officer no later than January 1, 2003, indicating that a retrofit control equipment is required for the hydrogen plant to comply with the emission limit of 2.5 pounds of VOC per million standard cubic feet of hydrogen produced and a complete application for Permit to Construct has been filed.

(d) Requirements for New or Reconstructed Hydrogen Plants

1. Within six months of its initial startup, the operator of a new or reconstructed hydrogen plant shall conduct an initial source testing in accordance with test methods listed in subdivision (f) and submit a complete test report to the Executive Officer.
2. An operator shall not operate a new or reconstructed hydrogen plant, unless the total VOC emissions from all process vents of the hydrogen plant combined are less than 0.5 pounds per million standard cubic feet of hydrogen produced as determined by test methods listed in subdivision (f).

(e) Monitoring, Reporting and Recordkeeping Requirements

1. The operator of a hydrogen plant shall conduct annual compliance testing to demonstrate compliance with paragraphs (c)(2), (c)(3), and (d)(2), as applicable. All compliance testing subsequent to the initial source testing for an existing, new or reconstructed hydrogen plant shall be conducted and test reports submitted to the Executive Officer within 12 calendar months from

previous testing and reporting. Notwithstanding the above, an operator who elects to comply with subparagraph (c)(2)(C) shall conduct semiannual testing commencing no later than July 1, 2001, and submit the test reports to the Executive Officer within six calendar months from previous testing and reporting until the operator complies with the requirements of paragraph (c)(3), after which the annual compliance testing is required.

2. To demonstrate compliance with paragraphs (c)(2), (c)(3), and (d)(2), as applicable, the operator shall certify that the information contained in the test reports is, to the best of his or her knowledge, accurate and represents the actual operating conditions of the plant at the time of the testing. The operator shall further certify that, based on the test results, the hydrogen plant is or is not in compliance with the applicable emission limit of this rule.
3. In the event that a VOC-containing process stream from a hydrogen plant is delivered to a third-party facility for processing, the Executive Officer may exclude VOC emissions from process vents located at the third-party facility from the compliance demonstration required in paragraphs (c)(2), (c)(3), and (d)(2), as applicable, provided that the operator of the hydrogen plant complies with the following:
   A. The operator submits a written request to the Executive Officer to exclude such emissions; and
   B. The operator conducts source testing in accordance with the test methods listed in subdivision (f) to quantify the VOCs contained in the process stream entering the third-party facility and reports them as VOC emissions for compliance determination purposes.
4. The operator of a hydrogen plant shall install a metering device to measure the total flow rates of hydrogen produced. This metering device shall be maintained in good operating condition and calibrated for the range in which it operates during source tests.
5. The operator of a hydrogen plant shall maintain all information required to determine the emission rate for compliance demonstration, including but not limited to the test results and operating parameters as required under Attachment A - Source Test Protocol for VOC Emissions from High Moisture Hydrogen Plant Process Vents. This information shall be maintained in a manner approved by the Executive Officer for a period of at least five years and made available to the Executive Officer upon request.

(f) Test Methods

The following test methods shall be used, as applicable, to determine compliance with this rule. All test methods referenced below shall be the most recent version issued by the respective organization. Alternative test methods may be used if they are determined to be equivalent and approved in writing by the Executive Officer, and by the California Air Resources Board and the U.S. Environmental Protection Agency.

1. District Source Test Protocol for VOC Emissions from High Moisture Hydrogen Plant Process Vents - Attachment A of this rule, or any equivalent revisions hereafter as approved by the Executive Officer.
2. District Method 25.3 - Determination of Low Concentration Non-Methane Non-Ethane Organic Compound Emissions from Clean Fueled Combustion Sources.
3. District Method 5.1 - Determination of Particulate Matter Emissions from Stationary Sources Using a Wet Impingement Train.
4. EPA Method 5 - Determination of Particulate Emissions from Stationary Sources.

Attachment A

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Source Test Protocol for VOC Emissions from High Moisture

Hydrogen Plant Process Vents

PURPOSE

This source test protocol provides guidance for determining the VOC emission rates from hydrogen plant process vents in terms of pounds of VOCs per million standard cubic feet of hydrogen produced (lb/MMscf). It specifies general conditions under which the source tests should be conducted in order for the Executive Officer to accept the test results as evidence for compliance demonstration with applicable provisions of Rule 1189. The SCAQMD Method 25.3 is the primary reference test method upon which this test protocol relies to determine the VOC and CO_2 concentrations in various streams. Other standard methods such as SCAQMD Methods 1.1/2.1 and 5.1 are also used to determine flow rates and for collecting representative samples. The protocol establishes guidelines for appropriate use of these test methods on hydrogen plant process vents. Since some of the vent streams from the hydrogen plants are difficult or in some cases impossible to be tested by the reference methods, the protocol also establishes criteria under which the principles of mass balance (material balance) may be used instead.

GENERAL REQUIREMENTS

1. The sampling, analysis, and reporting must be conducted by an SCAQMD Laboratory Approval Program (LAP) approved laboratory for the reference test methods where LAP approval is available.
2. All of the applicable process vents from a hydrogen plant must be tested simultaneously. This includes the deaerator, CO2, and any other atmospheric process vents that may contain VOC emissions. Alternatively, the testing of the individual stacks can be conducted at different times provided that the operating conditions listed in Item No. 4 below remain constant and records of operating conditions are properly maintained.
3. Testing must be conducted under normal operating conditions. Additionally, the hydrogen production must not be less than the annual operating hourly average.
4. The following operational parameters must be recorded during sampling and reported along with the measured emissions: hydrogen production rate, gas feed rate, shift reactor catalyst type, catalyst age, shift reactor inlet temperature, shift reactor inlet and outlet CO concentrations, steam-to-carbon ratio, and other measurable operating parameters that may affect VOC emissions.
5. All test results and calculation methods, including mass balance calculations, are subject to SCAQMD approval as to their consistency with the SCAQMD published and/or approved test methods, procedures, and protocols, as well as to the engineering and scientific principles, as applicable.
6. All measurements and process information used in calculating the emissions for compliance, particularly the hydrogen production rate, must be obtained using calibrated equipment within the range for which it is calibrated. Furthermore, the equipment must be calibrated within the calibration intervals specified by the manufacturer. The purity of the hydrogen product must also be determined using calibrated instrumentation or an SCAQMD approved analytical method so that the monitored product stream flow rate can be corrected to reflect exclusively the hydrogen production rate.

DETERMINATION OF FLOW RATE

Flow rates shall be determined by direct measurement except when direct measurement is infeasible

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and the Executive Officer approves an alternative mass balance approach upon request. Direct flow rate measurement shall follow the standard SCAQMD Method 1.1/2.1 Pitot tube traverse approach with sampling ports installed. Cyclonic flow checks are required as part of each test. Installation of sampling ports, when possible, is recommended for purposes of improved accuracy.

Where sample location or other constraints do not allow direct measurement of flow rates, the hydrogen plant operator shall submit a written request to the Executive Officer for approval of an alternative mass balance approach. The request shall include descriptions of the test constraints, the input to be used for calculating the flow rate and descriptions of the reliability of the input. Flow rates of CO_2 vents can be calculated by a carbon mass balance on the process and feed material. Mass emissions by this approach would require measurements of VOC and CO_2 at the CO_2 vents utilizing SCAQMD Method 25.3 as described in this protocol. Flow rates must be determined and carbon and hydrogen stoichiometric analyses must be performed for all feed streams that enter the process.

Flow rates for the deaerator vents can be difficult to measure either directly or by mass balance. Direct measurement is impeded by the common use of silencers at the deaerator vents causing elevated pressures at sampling ports. When practicable, a stack extension shall be employed in these cases for sampling. Mass balances cannot be applied for calculating flow rate since the primarily steam effluent condenses to an unknown extent in the process. Therefore, upon approval by the Executive Officer, an alternative mass balance approach may be used to directly calculate VOC mass emissions from deaerator vents without determining the flow rate. This approach is described in the section *Determination of Deaerator Emissions Using Mass Balance.*

DETERMINATION OF GASEOUS VOC OR TOTAL VOC WHEN DROPLETS ARE NOT PRESENT

To determine the appropriate sampling method for the VOC emissions, a determination of whether or not droplets are present at the sampling location must be made. The absence of droplets is verified by a stack temperature above the dew point of the gases at the sampling location (higher temperature if under pressure). Alternatively, the absence of droplets can be verified by similar (within 10%) emissions as measured by both condensable methods of this protocol (Method 5.1 versus Method 25.3) as measured by previous testing.

Provided that it has been determined that droplets are not present at the sampling location, SCAQMD Method 25.3 as shown in Figure 1 must be used to measure the gaseous portion of the VOC, and/or the total VOC. For most cases, the CO_2 vent can be sampled by using Method 25.3 since the temperature is expected to be above the dew point at the sampling location. For the primarily steam, deaerator exhaust, Method 25.3 must be supplemented by impinger sampling if the temperature is less than 212 ^{o}F.

For the deaerator vent, the trap volume specified in Method 25.3 must be increased to accommodate the high moisture. Using the six-liter canisters specified in Method 25.3, approximately 50 ml condensing water may be present. To accommodate for an initial 10 ml water charge and 1 ml of line rinse, a trap volume of 70 - 90 ml should be employed. For the CO_2 vent, the trap volume specified in Method 25.3 may or may not need to be increased depending on the moisture present.

To accommodate for potentially high concentrations as compared to the 50 ppm range that Method

25.3 is intended, the calibration range of the analytical instrument can be extended and/or dilution techniques employed. This is acceptable to the applicability of Method 25.3 since the method allows its use for higher concentrations when primarily water soluble VOC are present, subject to SCAQMD approval.

In employing Method 25.3, condensation must not occur prior to the flexible Teflon connector hose as in Figure 1.

DETERMINATION OF CONDENSABLE VOC WHEN DROPLETS ARE PRESENT

When droplets are present, a sample must be collected isokinetically using SCAQMD Method 5.1 (EPA Method 5) with the filter omitted. This method is likely to be applied exclusively to the deaerator vent and only when the temperature is less than 212 ^{o}F and the mass balance approach cannot be applied. The allowable range of isokinetics can be extended to 110% or less due to difficulties in maintaining isokinetics with the high moisture causing isokinetics of much less than 100%. The condensable VOC is expected to consist primarily of water-soluble methanol. For purposes of this protocol only, it can be assumed that the minimum 30 cubic feet of required sampling volume can be satisfied by applying the wet volume collected with an added safety margin. A minimum wet volume of 60 actual cubic feet and a minimum dry volume of 1.5 dry cubic feet are therefore required. These are similar to the volumes collected in previous development work. This wet sample volume is subject to the additional requirement that the analysis yields results of greater than five times the lower detection limit. The sampling rate is, therefore, much lower than is normally seen at the meter. The nozzle is sized so that the specified sample volume is collected over an approximate 60 minute period or less if the last non-silica gel impinger becomes full during the sampling. For sampling periods of less than 60 minutes, triplicate sampling is required.

Method 5.1 has provisions for including additional or larger volume impingers for high moisture sources. For 100 cubic feet of wet sample, this equates 2000 ml or more of condensate, which is capable of filling several standard impingers. The additional impinger approach is preferred over the enlarged impinger approach due to difficulties associated with poor heat-transfer surface area. The front impingers have been observed to experience overflow difficulties due to higher gas velocities in the front section. For these reasons a precondenser is highly recommended. The recommended configuration is a precondenser followed by five empty impingers followed by the standard Method 5.1 train without a filter as shown in Figure 2.

After completion of the sampling, the sampling train must be tightly sealed and kept chilled by ice or kept at 32 ^{o}F - 45 ^{o}F until analysis and during recovery. The sampling train is weighed then recovered and mixed into two composites (back and front sections) of the impinger contents using a minimal amount of rinse water. The back section consists of the last two impingers before the silica gel. The front section consists of the remaining non-silica gel impingers and probe and line rinses. During the recovery, sample agitation must be kept at a minimum to avoid loss of the volatile components. The samples must be analyzed within 72 hours of collection. The front section and back section composites are weighed and analyzed separately for VOC by the condensate trap analysis of SCAQMD Method 25.3. The stack concentration and mass emissions are calculated as in the Calculation section.

DETERMINATION OF DEAERATOR EMISSIONS USING MASS BALANCE

The mass balance approach for calculating deaerator mass emissions must only be used when safety constraints dictate that direct measurement should not be performed. Since past experiences with the mass balance approach have yielded high variability, a minimum of eight runs are required. Each run shall consist of collecting process samples and flow rate data for all streams that enter and exit the deaerator including the steam (condensate). The samples must be collected in an inert container such as glass with Teflon lined lids with zero headspace. The samples must be kept chilled until analysis and analyzed within 72 hour of collection for ppm VOC as carbon by weight by the condensate trap analysis in SCAQMD Method 25.3. Process flow rates must be obtained using calibrated instruments. Additionally, aside from the VOC emissions rate, the deaerator vent rate must be calculated as the difference between total inlet and outlet flows for quality assurance. A negative value, a high positive value, or large deviation between runs may be an indicator of an error and may cause the Executive Officer to reject the test results.

CALCULATION PROCEDURES

CO_2 Vent Flow Rate - Material Balance Alternative. If the CO_2 vent flow rate is determined by the carbon material balance, the flow rate shall be determined by the following relationship:

$$Q_{CO2} = Q_{Cin} - Q_{Cout} \qquad \text{Equation 1}$$

Where:

Q_{CO2} = CO_2 vent flow rate (dscfm)

Q_{Cin} = Flow rate into the unit on a carbon basis (dscfm) based on the feed rates or the average hydrogen production rate and a stoichiometric analysis of carbon and hydrogen in the process feed during testing.

Q_{Cout} = Flow rate out of the unit on a carbon basis for streams containing carbon such as with the hydrogen product stream.

Condensable VOC when Droplets are Present. If droplets are present and the Method 5.1 sampling was employed, the concentration of condensable VOC is determined for both front and back sections of each sample using the following equation in Method 25.3 Section 4.7 with the variables redefined as follows:

$$C_w = (C_i \times V_i \times V_{id})/(V_c \times A_c) \qquad \text{Equation 2}$$

Where:

A_c = Atomic weight of carbon (12.01 g/mol)

C_w = gaseous concentration of TOC as ppmC in condensate trap water

C_i = TOC concentration in ug/ml of condensate trap water

(Assume TOC concentration ug/g = ug/ml at 4°C)

V_i = volume collected in all impingers excluding the silica gel in ml

V_{id} = volume of ideal gas per mole (gram mole) at 60 °F (0.836 scf/mol)

V_c = metered gas volume in dry standard cubic feet

If the back section concentration is more than 10% of the front section concentration, then the sampling must be invalidated and re-run with more cooling in the front section.

VOC Concentration. If droplets were present, as verified by stack temperature or previous testing, the VOC concentration (ppmC) is reported as the sum of both sections of the VOC analysis of the Method 5.1 train, and the canister portion of the Method 25.3 analysis in units of ppmC. If no droplets were present, the ppm VOC is reported as the sum of the Method 25.3 trap and canister analysis as ppmC. The following relationship is used generically for both cases for each process vent:

$$\mathbf{C = C_{cond} + C_{gas}} \qquad \text{Equation 3}$$

Where:

C = VOC concentration (ppmC by volume)

C_{cond} = Concentration of condensable VOC by both sections of Method 5.1 if droplets present or by Method 25.3 if no droplets present (ppmC by volume)

C_{gas} = Concentration of gaseous VOC by Method 25.3 (ppmC by volume)

VOC Mass Emissions. Mass emissions from each stack are calculated using the concentration in Equation 3 in ppmC by volume, the dry standard volumetric flow rate from each stack, and the molecular weight and carbon number of methanol (MW = 32 lb/lb-mol, C# = 1) as follows:

$$\mathbf{M = F \times C \times (MW/C\#) \times Q} \qquad \text{Equation 4}$$

Where:

F = 1.583×10^{-7} (Conversion factor in min-lb-mol/hr-scf-ppm)

M = VOC mass emissions (lb/hr)

C = VOC concentration (ppmC as volume)

MW/C# =32 lb/lb/mol

Q = Flow rate (dscfm)

Alternative VOC Mass Emissions for Deaerator. When the mass balance approach is used, the emissions from the deaerator vent may be calculated using process flow rates and Method 25.3 analyses of process samples using the following equation:

$$M = \Sigma (Q_{in} \times C_{in} \times F_{mw} / 10^6) - \Sigma (Q_{out} \times C_{out} \times F_{mw} / 10^6)$$ Equation 5

Where:

$M =$	VOC mass emissions (lb/hr)
$Q_{in} =$	Inlet Process Flow Rates (lb/hr)
$C_{in} =$	VOC concentration in inlet process streams by Method 25.3 (ppmw)
$F_{mw} =$	Molecular weight correction = (32 lb/lb-mole) / (12 lb/lb-mole) = 2.67
$Q_{out} =$	Outlet Process Flow Rates (lb/hr)
$C_{out} =$	VOC concentration in outlet process streams by Method 25.3 (ppmw)

Total VOC Mass Emissions. Total VOC Mass Emissions in lb/hr is calculated by summing VOC Mass Emissions from all vent stacks using the following equation:

$$T = \Sigma M$$ Equation 6

Where:

$T =$	Total VOC Mass Emissions (lb/hr)
$M =$	VOC Mass Emissions from all individual vents stacks (lb/hr)

Total VOC Mass Emissions per Hydrogen Produced. Total VOC Mass Emissions in units of $lb/MMscf_{hydrogen\ produced}$ is calculated by using the following equation:

$$E = (2400 \times T) / (P \times H_2)$$ Equation 7

Where:

$E =$	Emissions in $lb/MMscf_{hydrogen\ produced}$
$T =$	Total VOC Mass Emissions (lb/hr
$P =$	Purity of hydrogen product stream (%) as determined by an approved method
$H_2 =$	Average hydrogen production rate during testing (MMdscfm)

TEST REPORT REQUIREMENTS

The final Source Test Report must include the following information:

1. A summary of the Source Test results presented in units of lb/MMscf of hydrogen produced.
2. A brief process description. Indicate equipment operation during testing, the operating parameters as specified in this protocol, as well as any other information which may influence the final report.

3. A simple schematic diagram of the process, showing the sampling locations.
4. A stack schematic depicting the sampling locations with respect to the upstream and downstream distances from flow disturbances. Also include a cross-sectional diagram of the stack or duct at the sampling location, depicting the sampling points with respect to compass direction.
5. The sampling and analytical procedures. Be specific about all aspects of sampling and analysis. Include diagrams of test equipment and methods.
6. Complete raw field data, including production data indicative of the testing interval, lab analyses, and the test results (show all calculations). The lab analyses must also include the associated chromatograms or other raw data generated during both sample and standard runs.
7. Calibration data regarding all sampling and measuring equipment utilized during testing (see District Source Testing Manual, Chapter III or "Quality Assurance Handbook For Air Pollution Measurement Systems", Vol. III, US EPA-600/4-77-0276).
8. A "No Conflict of Interest Statement" pursuant to SCAQMD Rule 304.
9. The sample "Chain of Custody" containing time and dated signatures of the person of responsible charge of the sample from the point of origination to analysis.

Figure 1- Sampling Equipment for Gaseous VOC or Total VOC

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When Droplets are not Present

Figure 2- Sampling Equipment for Condensable VOC when Droplets are Presen

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

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
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.

(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)

RULE 1303. REQUIREMENTS

(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 PM_{10} 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, the useful life of the source, and all 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

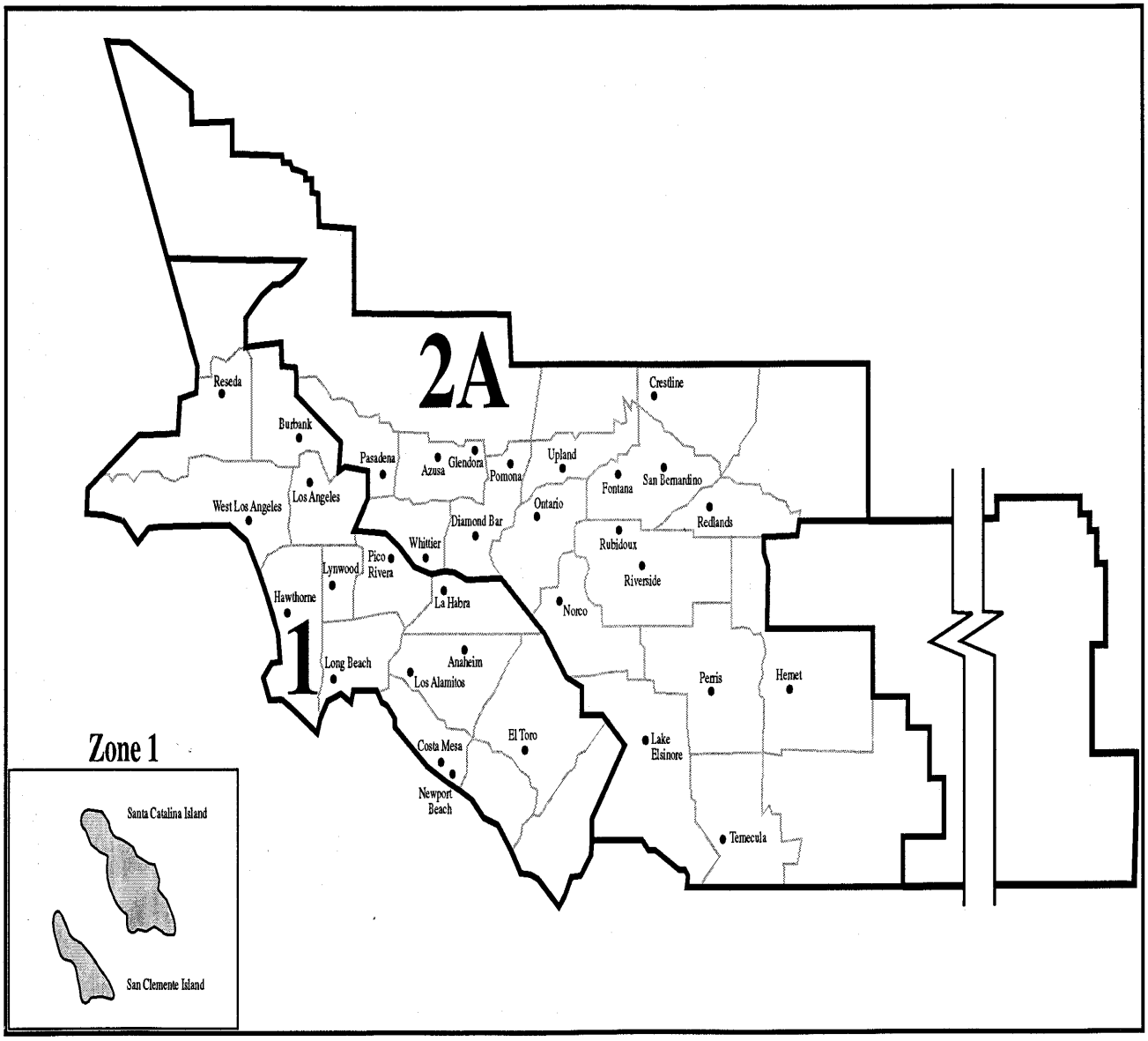
Heat Input Capacity (million BTUs/hr)		NO_x (lbs/hr)	CO (lbs/hr)	PM_{10} (lbs/hr)
Noncombustion Source		0.068	3.7	0.41
	< 2	0.20	11.0	1.2
>2	< 5	0.31	17.1	1.9
>5	< 10	0.47	25.9	2.8
>10	< 20	0.86	47.3	5.2
>20	< 30	1.26	69.3	7.6
>30	≤40	1.31	72.1	7.9

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 ug/m^3	1 pphm	20 ug/m^3
	Annual	5.3 pphm	100 ug/m^3	0.05 pphm	1 ug/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 Matter-<10um (PM_{10})	24-hour	50 ug/m^3			2.5 ug/m^3
	Annual Geometric Mean	30 ug/m^3			1 ug/m^3
Sulfate	24-hour	25 ug/m^3			1 ug/m^3

NSR Trading Zones
South Coast AQMD Air Monitoring Stations



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
San Jacinto	171

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)

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

(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)

RULE 1304. - EXEMPTIONS

(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.

(Adopted October 5, 1979)(Amended March 7, 1980)
(Amended September 10, 1982)(Amended April 6, 1984)

Rule 1305. Special Permit Provisions

(a) Modifications to Equipment Under Existing Permits

Any person operating permit units which are to be modified for the purpose of effecting emission reductions required by Rule 1307, or for banking pursuant to Rule 1309, shall submit applications for new permits to construct and operate for both the basic and control equipment involved in such reductions, regardless of whether modifications are to be made to the basic or control equipment.

(b) Surrender of Permits Existing permits to operate for:

(1) the basic and/or control equipment specified in section (a), shall be surrendered and canceled at the time new permits to operate are issued.

(2) equipment taken out of service to effect an emission reduction under Rule 1307 shall be surrendered at the time the permit units for w ' hich offsets are required are issued. permits to operate, or as specified by conditions on such new permits.

(3) equipment taken out of service to effect an emission reduction for banking under Rule 1309 shall be surrendered at the time application for ERC is approved,

(c) Where equipment will be taken out of service without the removal being associated with an application for permit to construct, the applicant may apply for either:

(1) an ERC, pursuant to Rule 1309; or

(2) registration of the emission reduction for accumulation with the net emission balance at the same source. Application for such registration shall be in the same manner as for an ERC and approval of such registration shall be subject to all the requirements of this regulation for accumulation of emissions at a source.

(d) Evaluation

In evaluating the permit applications and applications for ERC or registration of emissions reductions submitted pursuant to this regulation the Executive Officer shall:

(1) Determine completeness of the application and inform the applicant of such pursuant to Rules 210 and 1310(a); and

(2) Evaluate only those portions of the applicant's operations which pertain to the modifications to be made. No other review or analysis shall be made for the purpose of issuing new permits pursuant to this regulation.

(3) 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 Tactic in the AQMP which is identified therein as being cost effective and has been assigned a target implementation date. This exclusion shall remain in effect for 30 months from the date of adoption of the AQMP by the District Board or until the provisions of subsection (3)(C) become effective; or

(B) required by a proposed District rule for which the first public workshop to consider such rule has been conducted. This exclusion shall remain in effect for 12 months from the date of such workshop, or until the Executive Officer determines that the proposed rule is abandoned or the provisions of subsection (3)(C) become effective; or

(C) required by an adopted District rule or regulation; or

(D) from a category or class of equipment included in a demonstration program required by a District rule or regulation.

(E) The time limits in subparagraphs (3)(A) and (3)(B) may be extended on a rule-by-rule basis by action of the Board.

(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)

RULE 1306. EMISSION CALCULATIONS

(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) PM_{10} Emissions

The PM_{10} 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 PM_{10} 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.

(Adopted June 28, 1990)(Amended May 3, 1991)(Amended December 7, 1995)
(Amended April 20, 2001)(Amended November 9, 2001)(Amended May 3, 2002)

RULE 1309.1 - PRIORITY RESERVE

(a) Priority Reserve

A Priority Reserve is established to provide credits for specific priority sources. The funding of the Priority Reserve shall be made quarterly on March 31, June 30, September 30, and December 31 or other schedule deemed practicable by the Executive Officer or designee. The amount of this allocation shall not exceed the following amounts:

Air Contaminant	Quarterly Allocation (lbs per day)
Reactive Organic Gases (ROG)	500
Nitrogen Oxides (NOx)	250
Sulfur Dioxide (SOx)	60
Particulate Matter (PM10)	125
Carbon Monoxide (CO)	250

Notwithstanding the above, the Executive Officer shall transfer on a one-time basis by January 1, 2002, the following to the Priority Reserve for use exclusively by Electric Generating Facilities, and return any unused portion of this allocation as of December 31, 2003, to the District's NSR account.

Sulfur Dioxide (SOx)	750 lbs/day
Carbon Monoxide (CO)	6,000 lbs/day

The following priority sources will be qualified to draw from a pool of credits established every quarter.

(1) Innovative Technology

Is innovative equipment or a process which:

(A) the applicant demonstrates will result in a significantly lower emission rate from the affected source than would have occurred with the use of BACT; and

(B) can be expected to serve as a model for emission reduction technology.

(2) Research Operations

Is an experimental research operation for which:

(A) the purpose of the operation is to permit investigation, experiment or research to advance the state of knowledge or the state-of-the-art; and

(B) a specific time limit is imposed by the Executive Officer or designee, in no case exceeding two years.

(3) Essential Public Service

Is used to provide essential public service, provided the applicant:

(A) has provided all required offsets available by modifying sources to Best Available Retrofit Control Technology (BARCT) levels at the same facility; or

(B) demonstrates to the satisfaction of the Executive Officer or designee that the applicant owns or operates no sources within the facility which could be modified to BARCT levels to provide offsets.

For equipment not subject to any Regulation XI rule, application(s) for modifications providing offsets to satisfy subparagraph (A) of this section shall accompany the application(s) for the new source(s). For purposes of this section only, BARCT, as defined in the California Health and Safety Code Section 40406, shall not exceed any applicable District BACT cost guidelines and shall be determined as of the date that the application is deemed complete.

(4) Electrical Generating Facility (EGF)

Is a facility that generates electricity for its own use and is less than 10 Megawatts (MW); or is a facility less than 50 MegaWatts (MW) that generates not less than 30% of its electricity to pump water to maintain the integrity of the surface elevation of a municipality or significant portion thereof; or is a facility that generates electricity for distribution in the state grid system (net generator); such facility having submitted a complete application for certification to the California Energy Commission or permit to construct application during calendar years 2000, 2001, 2002, or

2003 directly related to the production of electricity, and provided the facility:

(A) meets BARCT for pollutants received from the Priority Reserve for all existing sources prior to the operation of the new source(s) or at a schedule approved by the Executive Officer and no later than 3 years following the issuance of a permit to construct the new source(s); and all sources under common ownership within the District are in compliance with all applicable District rules, variances, orders, and settlement agreements; and

(B) pays a non-refundable mitigation fee of the following amounts for each pound per day of each pollutant obtained from the Priority Reserve:

PM-10	$25,000
SOx	$8,900
CO	$12,000 ; and

(C) conducts a due diligence effort (limited to costs not to exceed the mitigation fee for that pollutant) approved by the Executive Officer or designee to secure available ERCs for requested Priority Reserve pollutants. Such efforts shall include securing available ERCs including those available through state emissions banks or creating ERCs through SIP approved credit generation programs as available; and

(D) has the new source(s) fully and legally operational at the rated capacity within 3 years following issuance of a Permit to Construct or California Energy Commission certification, whichever is later, subject to an extension by the Executive Officer consistent with SCAQMD Rule 205; and

(E) enters into long-term (at least one year) contract with the State of California to sell at least 50% of the portion of the power which it has generated using the Priority Reserve credits and provided the Executive Officer determines at the time of permitting, and based on consultation with State power agencies, that the state of California is entering into such long-term contracts and that a need for such contracts exists at the time of permitting, if the facility is a

net generator (this subsection does not apply to municipal utilities or joint power authorities).

(5) The following provisions shall apply to the Priority Reserve:

(A) Access to Priority Reserve Credits, except for those exclusively reserved for EGFs, shall be prioritized based on qualifying as an Essential Public Service or EGF and then, on the earliest date that an application is deemed complete.

(B) Each facility shall maintain a balance of total Priority Reserve Credits obtained.

(C) Essential Public Services may, at the discretion of the Executive Officer or designee, reserve Priority Reserve Offsets for up to three years to allow multiyear projects to be planned. The sum of such reservations shall amount to no more than 25 percent of the Priority Reserve allocation for those three years.

(D) The AQMD Governing Board may determine that a specific project shall be given priority for access to the priority reserve based on public health or safety regardless of date of application submitted.

(E) If a subject facility holds an Emission Reduction Credit (ERC), then that ERC must be used before access to the Priority Reserve is allowed.

(F) Allocations from the Priority Reserve shall not be banked or transferred.

(G) An aggregate total of 400 pounds per day for PM-10 shall be exclusively reserved for use by essential public services for calendar years 2001, 2002, and 2003.

(H) Offset credits obtained from the Priority Reserve by an EGF may not exceed the allowable emissions level of the newly permitted unit(s).

(I) The total amount of SOx and CO credits that may be issued by the Executive Officer to EGFs from the Priority Reserve shall not exceed 750 lbs/day of SOx and 6,000 lbs/day of CO.

(J) The Executive Officer shall monitor the PM-10 balance in the Priority Reserve and in the event the balance is less than 500 pounds per day the Executive Officer may transfer up to 1,500

pounds per day of PM-10 to the Priority Reserve. This transfer shall be done at a public meeting.

(b) Suspension of Health & Safety Code Section 42314.3

Pursuant to subsection (i) of Section 42314.3 of the Health & Safety Code, the District Board hereby suspends the applicability of Section 42314.3, since it determines that this rule makes adequate offsets available at a reasonable price to EGFs.

(c) Additional Requirements for Net Generators Accessing Priority Reserve Credits

Any net generator accessing Priority Reserve Credits shall comply with all terms and conditions in any Executive Officer order, whether expired or not, relating to the generator's access of Priority Reserve credits, whether such credits are used or not.

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

(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)

RULE 1309. EMISSION REDUCTION CREDITS

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 Title~~s~~ 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.

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

(Adopted Oct. 5, 1979)(Amended Sept. 10, 1982)(Amended July 12, 1985)
(Amended August 1, 1986)(Amended June 28, 1990)
(Amended December 7, 1995)

RULE 1310. ANALYSIS AND REPORTING

(a) Completeness of Application

The Executive Officer or designee shall determine whether or not the application is complete and shall notify the applicant in writing not later than 30 calendar days after receipt of the application, or after such longer time as both the applicant and the Executive Officer or designee may agree. If the application is determined to be incomplete, the determination shall specify which parts of the application are incomplete and how they can be made complete. Upon receipt by the Executive Officer or designee of any resubmittal of the application, a new 30-day period, in which the Executive Officer or designee must determine completeness, shall begin. Completeness of an application or resubmitted application shall be evaluated on the basis of the guidelines for such, published by the Executive Officer or designee.

(b) Reporting and Rule Modifications

By February 1997, and annually thereafter, the Executive Officer or designee shall report to the District Governing Board regarding the effectiveness of Regulation XIII in meeting the state and federal NSR requirements.

(c) Requirements for Public Notice

For those sources requesting emission reduction credits in excess of the amounts specified below:

Air Contaminant	Daily Maximum in Lbs Per Day
Volatile Organic Compounds (VOC)	30
Nitrogen Oxides (NOx)	40
Particulate Matter (PM10)	30
Sulfur Dioxide (SOx)	60
Carbon Monoxide (CO)	220

following acceptance of an application as complete, the Executive Officer or designee shall:

1. Perform the evaluations required to determine compliance with this regulation and make a preliminary written decision, as appropriate, as to whether or not an ERC should be approved or disapproved. The decision shall be supported by a succinct written analysis; and

2. Within ten calendar days following such decision, publish a notice by prominent advertisement in at least one newspaper of general circulation in the District stating the preliminary decision of the Executive Officer or designee and where the public may inspect the information required to be made available under paragraph (c)(3). The notice shall provide 30 days from the date of publication for the public to submit written comments on the preliminary decision; and
3. At the time notice of the preliminary decision is published, make available for public inspection at the District office the information submitted by the applicant, the supporting analysis for the preliminary decision, and the preliminary decision to grant or deny an ERC and the reasons therefore. The confidentiality of trade secrets shall be considered in accordance with Section 6254.7 of the Government Code.

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

(Adopted Oct. 5, 1979)(Amended March 7, 1980)(Amended Sept. 10, 1982)
(Amended July 12, 1985)(Amended June 28, 1990)
(Amended December 7, 1995)

RULE 1313. PERMITS TO OPERATE

(a) Change of Operator

The Executive Officer or designee shall exempt from the provisions of this rule any facility which is a continuing operation, without modification or change in operating conditions, when a permit to operate is required solely because of permit renewal, change in operator, or a change in Rule 219 (Equipment Not Requiring a Permit).

(b) No Permit to Construct Issued

For new or modified sources or facilities which are constructed without the required Permit to Construct, the application for a Permit to Operate shall, for the purpose of this rule, be considered an application for a Permit to Construct. The Executive Officer or designee shall deny the Permit to Operate unless the new or modified facility complies with all provisions of Regulation XIII. All offsets must be obtained within 90 days after notice from the Executive Officer or designee that offsets are required.

(c) Additional Offsets

The Permit to Operate shall be denied if it is determined that actual emissions are greater than previously calculated when the Permit to Construct was issued, unless additional offsets are obtained within 90 days after notice from the Executive Officer or designee that offsets are required to mitigate the increase.

(d) Start-Up

For a new source or modification which will be a replacement, in whole or part, for an existing source on the same or contiguous property, a maximum of 90 days may be allowed as a start-up period for simultaneous operation of the subject sources.

(e) Permit Conditions

The Executive Officer or designee shall require as a condition for the issuance of any Permit to Operate for a new or modified facility, that the facility and any offset facility be operated consistent with any conditions imposed on their respective Permit to Construct.

(f) Major Facility Permit Condition Limitation Relaxation

Any major source that has taken a permit condition limiting a source's mass emissions in order to avoid NSR since August 1980 shall be subject to provisions of Regulation XIII if such permit condition is removed or relaxed in any way.

(g) Emission Limitation Permit Conditions

Every permit shall have the following conditions:

1. Identified BACT conditions;
2. Monthly maximum emissions from the permitted source.

PROPOSED RULE 1315 FEDERAL NEW SOURCE REVIEW TRACKING SYSTEM

(a) Purpose

The purpose of this rule is to:

(1) Maintain the District's ability to continue through December 31, 2030 to issue permits to major sources that obtain offset credits from the Priority Reserve under Rule 1309.1 and/or that are exempt from offsets under Rule 1304;

(2) Memorialize in rule form the procedures to be followed by the Executive Officer for:

(A) Establishing the District's NSR program equivalency with federal NSR offset requirements for such major sources; and

(B) Demonstrating that sufficient emission reductions, including previously-untracked emission reductions, existed beyond regulatory requirements under federal law to be used as offset credits to establish that the District's NSR program is equivalent with federal NSR offset requirements for major sources that are exempt from offsets under Rule 1304 orobtain offset credits from the Priority Reserve under Rule 1309.1.

(b) Definitions

(1) COMMUNITY BANK means the Community Bank as established by Rule 1309.1 – Community Bank, as adopted June 28, 1990 and by Rule 1309.1 – Community Bank And Priority Reserve, as amended May 3, 1991, and became unavailable to applications deemed complete after the December 7, 1995 amendments to Rule 1309.1 – Priority Reserve, which eliminated the Community Bank.

(2) NET EMISSION INCREASE means the aggregate increase in potential to emit from permitted major and minor stationary sources of a nonattainment air contaminant subject to tracking pursuant to paragraph (c)(2) of this rule that are offset from the Priority Reserve orexempt from offsets pursuant to Rule 1304 minus the aggregate emissions reductions of the same nonattainment air contaminant tracked pursuant to paragraph (c)(3) of this rule over the same time period.

(3) OFFSET RATIO means the ratio of the quantity of offset credits provided (in pounds per day) to the increase in potential emissions (in pounds per day) requiring offsets.

(4) ORPHAN REDUCTION means any reduction in actual emissions from a permitted source within the District resulting from a physical change to the source and/or a change to the method of operation of the source provided the change is reflected in a revised permit for the source and provided such reduction is not otherwise required by rule, regulation, law, approved Air Quality Management Plan Control Measure, or the State Implementation Plan and does not result in issuance ofan ERC.

(5) ORPHAN SHUTDOWN means any reduction in actual emissions from a permitted source within the District resulting from removal of the source from service and inactivation of the permit without subsequent reinstatement of such permit provided such reduction is not otherwise required by rule, regulation, law, approved Air Quality Management Plan Control Measure, or the State Implementation Plan and does not result in issuance of an ERC.

(6) PRIORITY RESERVE means the Priority Reserve as established by the June 28, 1990 adoption of Rule 1309.1 – Community Bank and as amended by the May 3, 1991 amendments to Rule 1309.1 – Community Bank and Priority Reserve and by the December 7, 1995 and subsequent amendments to Rule 1309.1 – Priority Reserve.

(7) SHORTFALL means a negative net balance in any of the District offset accounts described in paragraph (c)(1) of this rule as demonstrated through an FDE prepared pursuant to paragraph (d)(3) of this rule or projected pursuant to subdivision (e) of this rule.

(c) Offset Accounts for Federal NSR Equivalency

(1) District Offset Accounts for Federal Nonattainment Air Contaminants
The Executive Officer shall maintain a separate District offset account for each federal nonattainment air contaminant excluding PM2.5. The District offset accounts were established as of October 1, 1990 with valid emission reductions that had occurred prior to that date, as reflected in various facilities' negative NSR account balances and that were aggregated as the initial account balances listed in Table A for each nonattainment air contaminant. Any portions of the initial account

balances identified in Table Aremaining in the District offset accounts at the end of calendar year 2005 were removed from the District offset accounts as an environmental benefit by the Executive Officer and are not used for purposes of demonstrating equivalency between federal NSR offset requirements and the District's NSR program. Additional District offset accounts are to be established by the Executive Officer in the event that additional federal nonattainment air contaminants other than PM2.5 or their precursors become subject to federal nonattainment NSR offset requirements, unless by rule the District establishes that Rule 1304 and Rule 1309.1 do not apply to such contaminants or their precursors. If the United States Environmental Protection Agency (EPA) re-designates the District's attainment status from nonattainment to attainment for aspecific air contaminant the Executive Officer may discontinue tracking and reporting the associated District offset account for that air contaminant provided there is a showing in the maintenance plan that the continued use of emissions offsets for that air contaminant is not necessary to maintain attainment for that air contaminant. The District's NSR program shall be considered equivalent to federal nonattainment NSR offset requirements for a nonattainment air contaminant so long as the procedures specified in this rule are followed and the balance in the District offset account for that air contaminant remains positive.

TABLE A

Initial District Offset Account Balances

Air Contaminant	Initial Account Balance (tons per day)
Volatile Organic Compounds (VOC)	38.46
Nitrogen Oxides (NOx)	23.92
Sulfur Oxides (SOx)	8.04
Carbon Monoxide (CO)	8.45
Particulate Matter (PM10)	2.67

(2) Tracking of Offset Account Debits for Federal NSR Equivalency

The Executive Officer shall track the amount of emissions and debit from the District offset accounts for the following types of offset allocations or exemptions provided from the District offset accounts for sources located

at major polluting facilities and that are notexempt from the offset requirements of federal nonattainment NSR:

(A) Emission offsets from the Priority Reserve orCommunity Bank pursuant to Rule 1309.1; and

(B) Exemptions from the offset requirements of Rule 1303 – Requirements pursuant to Rule 1304 – Exemptions.

The applicable offset ratios for offsets tracked by the Executive Officer pursuant to this paragraph is 1.2-to-1.0 for extreme nonattainment air contaminants and their precursors and is 1.0-to-1.0 for all other nonattainment air contaminants.

(3) Tracking of Offset Account Credits for Federal NSR Equivalency

(A) The Executive Officer shall track and verify the amount of the following types of emission reductions that have occurred since October 1, 1990 to the District offset accounts:

(i) Orphan shutdowns;

(ii) Orphan reductions;

(iii) ERCs provided as emission offsets for sources located at minor facilities;

(iv) The difference between the quantity of ERCs provided for a source located at a major polluting facility at a 1.2-to-1.0 offset ratio pursuant to Rule 1303(b)(2)(A) and the quantity of ERCs required to offset the emission increases at a ratio of 1.0-to-1.0 for all non-attainment air contaminants except extreme nonattainment air contaminants and their precursors.

(v) The amount of emission reductions associated with a facility's NSR balance, Community Bank and Priority Reserve allocations, and offset exemptions that is subtracted from the emission reductions quantified pursuant to Rule 1306(c) as part of the Executive Officer's evaluation of an ERC banking application; and

(vi) The difference between the actual daily emission reductions calculated pursuant to Rule 1306(c) with and without the BACT adjustment required in Rule 1306(c)(2) as part of the Executive Officer's evaluation of an ERC banking application. This clause applies only in cases

where the Executive Officer demonstrates and EPA concurs that the subtracted amount is not otherwise required by rule, regulation, law, approved Air Quality Management Plan Control Measure, or the State Implementation Plan. This clause is not applicable to emission reductions that occur in the Riverside County portion of the Salton Sea Air Basin (SSAB) or the non-Palo Verde, Riverside County portion of the Mojave Desert Air Basin (MDAB).

(B) The Executive Officer shall quantify and deposit emission reductions that are tracked pursuant to subparagraph (c)(3)(A) of this rule into the District offset accounts according to the following procedures:

(i) From orphan sources tracked pursuant to clauses (c)(3)(A)(i) or (c)(3)(A)(ii) of this rule at eighty percent of the total or change in the source's NSR permitted emission levels, respectively; and

(ii) From ERCs tracked pursuant to clauses (c)(3)(A)(iii), (c)(3)(A)(iv), (c)(3)(A)(v), and (c)(3)(A)(vi) of this rule in the amounts specified pursuant to those clauses.

(C) The Executive Officer may choose notto track all potential sources of credits in any reporting period if the Executive Officer determines that sufficient credits remain in the District offset accounts to demonstrate equivalency in each reporting period.

(4) Surplus at the Time of Use

All credits deposited into the District offset accounts pursuant to clauses (c)(3)(A)(i), (c)(3)(A)(ii), and (c)(3)(A)(vi) of this rule shall be discounted by the Executive Officer to ensure that they remain surplus at the time of use. Such discounting shall be performed annually and shall be based on the percentage reduction in overall permitted emissions projected to be achieved as a result of implementation of control requirements that became effective during the previous calendar year for each specific nonattainment air contaminant within the District.

(5) Tracking Sequence

The tracking elements described in paragraphs (c)(2) through (c)(4) of this rule shall be carried out separately for each District Offset Account in the

following sequence for each reporting period as defined in paragraph (d)(1) of this rule:

(A) Apply the surplus at the time ofuse discount described in paragraph (c)(4) of this rule to the offsets tracked pursuant to subparagraph (c)(3)(A) of this rule remaining in the District Offset Account, if any;

(B) Subtract as much of the aggregate District Offset Account debits tracked and quantified pursuant to paragraph (c)(2) of this rule from the unused Table A initial balance remaining in the corresponding District Offset Account, if any, as possible without resulting in a negative District Offset Account balance;

(C) Subtract the aggregate District Offset Account debits tracked and quantified pursuant to paragraph (c)(2) of this rule remaining after conducting the subtraction specified in subparagraph (c)(5)(A) of this rule, if any, from the corresponding District Offset Account balance; and

(D) Add the emission reductions tracked pursuant to subparagraph (c)(3)(A) of this rule for the current reporting period to the corresponding District Offset Account Balance.

The PDE for each reporting period through the 2005 reporting period shall follow the tracking sequence identified in subparagraphs (c)(5)(A), (c)(5)(B), and (c)(5)(C) and the PDE for each reporting period commencing with the 2006 reporting period shall follow the tracking sequence identified in subparagraphs (c)(5)(A) and (c)(5)(C). The FDE for each reporting period shall be completed by adding the results of subparagraph (c)(5)(A) tracking to the PDE results for the same reporting period.

(6) Federal Offset Criteria

Offset account credits used to offset debits pursuant to Rule 1304 or Rule 1309.1, as specified in paragraph (c)(2), are real as specified in subparagraphs (c)(3)(A) and (c)(3)(B), surplus as specified in paragraphs (b)(4), (b)(5), and (c)(4), permanent as specified in paragraphs (b)(4) and (b)(5) and subparagraph (c)(3)(A), quantifiable as specified in paragraphs (c)(1), (c)(3), (c)(4), and (c)(5), and enforceable as specified in paragraphs (b)(4), (b)(5), and (c)(3).

(d) Federal NSR Equivalency Determination Reports

(1) Reporting Periods

The Executive Officer shall aggregate and track offsets debited from and offsets deposited to the District offset accounts into the following reporting periods for purposes of making periodic determinations of equivalency:

(A) October 1, 1990 through July 31, 1995;

(B) Each of the consecutive twelve-month periods commencing with August 1995 through July 1996 and concluding with August 2003 through July 2004;

(C) August 2004 through December 2005;

(D) Each calendar year from 2006 through 2009; and

(E) Each calendar year from 2010 through 2030.

(2) Preliminary Determinations of Equivalency

Commencing with the calendar year 2010 reporting period, and for each reporting period thereafter, the Executive Officer shall, no later than twelve months after the completion of the reporting period, complete a Preliminary Determination of Equivalency (PDE) with federal nonattainment NSR offset requirements. The Executive Officer shall report the PDE to the District's Governing Board and EPA no later than the second regularly-scheduled monthly Governing Board meeting after the completion deadline for the PDE. The PDE is a conservative assessment of the District offset account balances without accounting for orphan and other credits that become available during the subject reporting period. Each PDE shall include the debit accounting elements identified in paragraph (c)(2) of this rule and the running balances in the District offset accounts at the beginning and at the end of the subject reporting period.

(3) Final Determinations of Equivalency

Commencing with the calendar year 2010 reporting period, and for each reporting period thereafter, the Executive Officer shall complete aFinal Determination of Equivalency (FDE) with federal nonattainment NSR offset requirements for each District Offset Account. The FDE for each account shall be completed no later than eighteen months after the completion of the subject reporting period. The Executive Officer shall report the FDE to the District's Governing Board and EPA no later than

the second regularly-scheduled monthly Governing Board meeting after the completion deadline for the FDE for any account(s) for which the PDE did not demonstrate equivalence. Each FDE shall include both the debit and the credit accounting elements identified in paragraphs (c)(2) and (c)(3) of this rule, respectively, and the running balances in the District offset accounts at the beginning and at the end of the subject reporting period. The Executive Officer shall report the FDE for any account(s) for which the PDE did demonstrate equivalence no later than the reporting deadline for the subsequent reporting period's PDE specified in paragraph (d)(2) of this rule.

(4) Early FDE Subsuming PDE

In lieu of preparing both a PDE and an FDE for a single reporting period, the Executive Officer may opt to include the PDE in the FDE for the same reporting period. Such FDEs are subject to the same completion and reporting deadlines as are the PDEs that they subsume.

(e) Projections of District Offset Account Balances

Each PDE report and each FDE report the Executive Officer prepares and presents to the Governing Board and EPA shall also include projections of the District offset account balances at the end of each of the two subsequent reporting periods. The Executive Officer shall make the projections of the District offset account balances based upon the average ofthe total annual debits and the average of the total annual credits for the five reporting periods most recently included in a PDE or an FDE. Although these projections are to be reported with the results of the PDEs and FDEs, they are separate from the determinations of equivalency and do not constitute an element of the determinations of equivalency.

(f) Equivalency Backstop Provisions

(1) Funding of the Priority Reserve and Issuance of Permits

If the most recent District offset account balances determined by an FDE pursuant to paragraph (d)(3) of this rule demonstrate ashortfall for any air contaminant, the Executive Officer shall:

(A) Discontinue funding the Priority Reserve for any air contaminant that the most recent FDE has demonstrated does not have a positive balance in its District offset account no later than the

completion deadline for the FDE specified in paragraph (d)(3) of this rule. The Executive Officer may resume funding the Priority Reserve upon completion of an FDE demonstrating that the shortfall no longer exists.

(B) Discontinue issuing permits to construct and permits to operate that are subject to paragraph (c)(2) Offset Account debits resulting in the further use of Rule 1304 exemptions or Priority Reserve offsets from Rule 1309.1 for the air contaminant that has a shortfall to sources that are major sources of that air contaminant commencing no later than the completion deadline for the FDE demonstrating the shortfall. Additionally, the Executive Officer shall place all major source applications that would otherwise qualify for an offset exemption pursuant to Rule 1304 or to access the Priority Reserve for the air contaminant that has a shortfall on hold until the results of an FDE demonstrating that the shortfall has been rectified have been reported to and approved by the Governing Board unless the applicant elects to provide sufficient ERCs to offset the emissions increase pursuant to Rule 1303(b)(2). The Executive Officer may resume issuance ofsuch permits upon completion of an FDE demonstrating that the shortfall no longer exists.

(2) Report to the Governing Board: Rectification of aShortfall

If an FDE demonstrates that a shortfall exists in any of the District offset accounts, or the most recent projected District offset balances calculated pursuant to subdivision (e) of this rule predict that such a shortfall will exist, the Executive Officer shall prepare a report to the Governing Board recommending appropriate action to rectify the shortfall. The Executive Officer shall present this report to the Governing Board no later than six months after the paragraph (d)(2) or (d)(3) completion deadline for the PDE projecting or the FDE demonstrating or projecting the shortfall. The report shall either recommend implementing oneor more ofthe following backstop provisions as needed to correct the shortfall or include an explanation of why it is not necessary to implement any of the following backstop provisions by making ademonstration that the District remains in compliance with federal nonattainment NSR offset requirements on an aggregate basis:

(A) Provide additional credits to the District offset account(s) that have a shortfall within six months of the FDE that demonstrated the shortfall or the subdivision (e) projection that predicted it. The Executive Officer may obtain such credits by purchasing them, by funding emission reduction projects using quantification protocols approved by EPA, by applying BACT (federal LAER) in excess of federal requirements, or by other methods approved by EPA; and/or

(B) Propose amendments to Rule 1304 and/or Rule 1309.1 to eliminate certain offset exemptions or to eliminate certain sources' eligibility to receive offsets from the Priority Reserve, respectively.

The report shall also include aproposed timeline for implementation of the actions it recommends.

(g) California Environmental Quality Act Backstop Provisions

(1) Net Emission Increases

(A) Emission Increases at Major and Minor Facilities

In addition to the tracking of offset account debits provided to sources at major polluting facilities pursuant to paragraph (c)(2) of this rule, the Executive Officer shall track all increases in potential to emit that occur at major and minor facilities pursuant to Rule 1304 or Rule 1309.1. Increases in potential to emit at minor facilities tracked pursuant to this paragraph shall not constitute debits from the District offset accounts.

(B) Calculation of Net Emission Increases

The Executive Officer shall calculate the cumulative net emission increase of each nonattainment air contaminant that is tracked pursuant to paragraphs (c)(2) and (c)(3) of this rule from [date of adoption] through the end of the calendar year 2011 reporting period and through the end of each subsequent reporting period no later than the FDE completion deadline for each such reporting period specified in paragraph (d)(3) of this rule.

(C) Reporting Net Emission Increases

The Executive Officer's report to the Governing Board of each FDE commencing with the FDE for the calendar year 2011 reporting period shall include the cumulative net emission

increases from [date of adoption] through the end of the reporting period analyzed by the FDE calculated pursuant to paragraph (d)(3) of this rule. In cases where, pursuant to paragraph (d)(3) of this rule, the Executive Officer reports the credit accounting elements identified in paragraph (c)(3) of this rule with the PDE for the subsequent reporting period, the Executive Officer shall also report the cumulative net emission increase(s) for the same air contaminant(s) with the PDE for the subsequent reporting period. Although net emission increases are to be reported with the results of the FDEs, they are separate from the FDEs and do not constitute an element of the FDEs.

(2) Projections of Cumulative Net Emission Increases

Each PDE report and each FDE report the Executive Officer prepares and presents to the Governing Board and EPA commencing with the reports analyzing the 2011 reporting period shall also include projections of the cumulative net emission increases at the end of each of the two subsequent reporting periods. The Executive Officer shall make the projections of the cumulative net emission increases from both major sources and minor sources based upon the average of the aggregate increase in potential to emit of each nonattainment air contaminant subject to tracking pursuant to paragraph (c)(2) of this rule and the average of the aggregate emissions reductions of the same nonattainment air contaminant for the five reporting periods most recently included in a PDE or an FDE or each of the reporting periods commencing with the 2011 reporting period, whichever is fewer reporting periods. Although these projections are to be reported with the results of the PDEs and FDEs, they are separate from the determinations of equivalency and do not constitute an element of the determinations of equivalency.

(3) Issuance of Permits

If the cumulative net emission increase of anonattainment air contaminant, as tracked pursuant to subparagraph (g)(1)(B) of this rule and reported with an FDE pursuant to subparagraph (g)(1)(C) of this rule, exceeds the paragraph (g)(4) threshold or is projected pursuant to paragraph (g)(2) of this rule to exceed the paragraph (g)(4) threshold for that air contaminant, the Executive Officer shall discontinue issuing permits to construct and permits to operate that rely on further use of Rule

1304 exemptions or Rule 1309.1 Priority Reserve offsets for that air contaminant to major and minor sources of that air contaminant. Such permit issuance shall cease no later than the paragraph (d)(2) PDE completion deadline orthe paragraph (d)(3) FDE completion deadline applicable to the PDE or FDE with which the paragraph (g)(4) threshold exceedance or projected exceedance will be reported to the Governing Board. The Executive Officer shall not resume issuing such permits unless and until the corresponding cumulative net emission increase returns to a level at least ten percent below the threshold for the year in which permitting is to resume, as shown in Table B.

(4) Cumulative Net Emission Increase Thresholds

The cumulative net emission increase thresholds based upon the growth assumptions in the 2007 AQMP for [date of adoption] through December of 2011 and each subsequent year through 2030 are presented in Table B.

TABLE B
Cumulative Net Emission Increase Thresholds
(tons per day)

[date of adoption] through December of	VOC	NOx	SOx	PM10
2011	1.68	0.15	0.04	0.24
2012	2.80	0.25	0.06	0.40
2013	3.91	0.35	0.09	0.55
2014	5.03	0.45	0.11	0.71
2015	6.30	0.53	0.14	0.90
2016	7.58	0.61	0.18	1.09
2017	8.85	0.68	0.21	1.29
2018	10.12	0.76	0.24	1.48
2019	11.39	0.84	0.27	1.67
2020	12.67	0.92	0.30	1.86

[date of adoption] through December of	VOC	NOx	SOx	PM10
2021	13.94	1.00	0.33	2.05
2022	15.21	1.08	0.36	2.24
2023	16.48	1.15	0.39	2.43
2024	17.73	1.27	0.42	2.63
2025	18.98	1.39	0.45	2.83
2026	20.23	1.50	0.48	3.03
2027	21.49	1.62	0.51	3.23
2028	22.74	1.73	0.55	3.43
2029	23.99	1.85	0.58	3.63
2030	25.24	1.96	0.61	3.83

(h) State Implementation Plan Submittals

The Executive Officer shall not submit paragraphs (b)(2) or subdivisions (g) and (h) of this rule to the California Air Resources Board or to EPA for inclusion in the California State Implementation Plan.

(i) Sunset Date for Permit Issuance

This rule shall expire on January 1, 2031.

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

(Adopted June 3, 2011)(Amended December 5, 2014)

RULE 1325. FEDERAL $PM_{2.5}$ NEW SOURCE REVIEW PROGRAM

(a) Applicability

This rule applies to any new major polluting facility, major modifications to a major polluting facility, and any modification to an existing facility that would constitute a major polluting facility in and of itself; located in areas federally designated pursuant to Title 40 of the Code of Federal Regulations (40 CFR) 81.305 as non-attainment for $PM_{2.5}$.

With respect to major modifications, this rule applies on a pollutant-specific basis to emissions of $PM_{2.5}$ and its precursors, for which (1) the source is major, (2) the modification results in a significant increase, and (3) the modification results in a significant net emissions increase.

(b) Definitions

For the purposes of this rule, the definitions in Title 40 CFR 51.165(a)(1), as it exists on June 3, 2011 shall apply, unless the same term is defined below, then the defined term below shall apply:

(1) BASELINE ACTUAL EMISSIONS means the rate of emissions, in tons per year, of a regulated NSR pollutant, as determined in accordance with the following:

(A) For any existing electric utility steam generating unit, baseline actual emissions means the average rate, in tons per year, at which the unit actually emitted the pollutant during any consecutive 24-month period selected by the owner or operator within the 5-year period immediately preceding when the owner or operator begins actual construction of the project. The Executive Officer shall allow the use of a different time period upon a determination that it is more representative of normal source operation.

(i) The average rate shall include fugitive emissions to the extent quantifiable, and emissions associated with startups, shutdowns, and malfunctions.

(ii) The average rate shall be adjusted downward to exclude any non-compliant emissions that occurred while the source was operating

above any emission limitation that was legally enforceable during the consecutive 24-month period.

(iii) For a regulated NSR pollutant, when a project involves multiple emissions units, only one consecutive 24-month period must be used to determine the baseline actual emissions for the emissions units being changed. A different consecutive 24-month period can be used for each regulated NSR pollutant.

(iv) The average rate shall not be based on any consecutive 24-month period for which there is inadequate information for determining annual emissions, in tons per year, and for adjusting this amount if required by (b)(1)(A)(ii) above.

(B) For an existing emissions unit (other than an electric utility steam generating unit), baseline actual emissions means the average rate, in tons per year, at which the emissions unit actually emitted the pollutant during any consecutive 24-month period selected by the owner or operator within the 10-year period immediately preceding either the date the owner or operator begins actual construction of the project, or the date a complete permit application is received by the Executive Officer for a permit required under NSR or Prevention of Significant Deterioration (PSD), whichever is earlier, except that the 10-year period shall not include any period earlier than November 15, 1990.

(i) The average rate shall include fugitive emissions to the extent quantifiable, and emissions associated with startups, shutdowns, and malfunctions.

(ii) The average rate shall be adjusted downward to exclude any non-compliant emissions that occurred while the source was operating above an emission limitation that was legally enforceable during the consecutive 24-month period.

(iii) The average rate shall be adjusted downward to exclude any emissions that would have exceeded an emission limitation with which the major polluting facility must currently comply, had such major polluting facility been required to comply with such limitations during the consecutive 24-month period.

(iv) For a regulated NSR pollutant, when a project involves multiple emissions units, only one consecutive 24-month period must be used to determine the baseline actual emissions for all the

emissions units being changed. A different consecutive 24-month period can be used for each regulated NSR pollutant.

(v) The average rate shall not be based on any consecutive 24-month period for which there is inadequate information for determining annual emissions, in tons per year, and for adjusting this amount if required by (b)(2)(B)(ii) and (b)(2)(B)(iii) above.

(C) For a new emissions unit, the baseline actual emissions for purposes of determining the emissions increase that will result from the construction and operation of such unit shall equal zero; and thereafter, for all other purposes, shall equal the unit's potential to emit.

(D) For a Plantwide Applicability Limitation (PAL) for a major polluting facility, the baseline actual emissions shall be calculated for existing electric utility steam generating units in accordance with the procedures contained in paragraph (b)(1)(A), for other existing emissions units in accordance with the procedures contained in paragraph (b)(1)(B), and for a new emissions unit in accordance with the procedures contained in paragraph (b)(1)(C).

(2) 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 40CFR 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.

(3) MAJOR MODIFICATION means:

(A) Any physical change in or change in the method of operation of a major polluting facility that would result in: a significant emissions increase of a regulated NSR pollutant; and a significant net emissions increase of that pollutant from the major polluting facility.

(B) A physical change or change in the method of operation shall not include:

(i) Routine maintenance, repair, and replacement;

(ii) Use of an alternative fuel or raw material by reason of an order under section 2 (a) and (b) of the Energy Supply and Environmental Coordination Act of 1974 (or any superseding legislation) or by reason of a natural gas curtailment plan pursuant to the Federal Power Act;

(iii) Use of an alternative fuel by reason of an order or rule under section 125 of the Energy Supply and Environmental Coordination Act;

(iv) Use of an alternative fuel at a steam generating unit to the extent that the fuel is generated from municipal solid waste;

(v) Use of an alternative fuel or raw material by a polluting facility which:

(A) The source was capable of accommodating before January 6, 1975, unless such change would be prohibited under any federally enforceable permit condition which was established after January 6, 1975, pursuant to 40 CFR 52.21 or under regulations approved pursuant to 40 CFR subpart I or 40 CFR 51.166; or

(B) The source is approved to use under any permit issued under 40 CFR 51.165;

(vi) An increase in the hours of operation or in the production rate, unless such change would be prohibited under any federally enforceable permit condition which was established after January 6, 1975 pursuant to 40 CFR 52.21 or under regulations approved pursuant to 40 CFR subpart I or 40 CFR 51.166;

(vii) Any change in ownership at a polluting facility.

(C) This definition shall not apply with respect to a particular regulated NSR pollutant when the major polluting facility is complying with the requirements under subdivision (e) of this rule for a Plantwide Applicability Limit (PAL) for that pollutant. Instead, the definition in paragraph (e)(2)(H) shall apply.

(4) MAJOR POLLUTING FACILITY means, on a pollutant specific basis, any emissions source located in areas federally designated pursuant to 40 CFR 81.305 as non-attainment for the South Coast Air Basin (SOCAB) which has actual emissions of, or the potential to emit, 100 tons or more per year of $PM_{2.5}$, or its precursors. A facility is considered to be a major polluting facility only for the specific pollutant(s) with a potential to emit of 100 tons or more per year.

(5) MAJOR SOURCE as used in any definition found in 40CFR 51.165(a)(1), means the same as Major Polluting Facility, as defined in this rule.

(6) PLANTWIDE APPLICABILITY LIMITATION means an emissions limitation as defined in 40 CFR 51.165(f)(2)(v).

(7) $PM_{2.5}$ means airborne particulate matter with a nominal aerodynamic diameter of 2.5 micrometers or less as measured by the reference test methods in paragraph (h). Gaseous emissions which condense to form $PM_{2.5}$ at ambient temperatures shall also be included as $PM_{2.5}$.

(8) PRECURSORS means, for the purposes of this rule, nitrogen oxides (NOx) and sulfur dioxides (SO_2).

(9) PROJECTED ACTUAL EMISSIONS means the maximum annual rate, in tons per year, at which an existing emissions unit is projected to emit a regulated NSR pollutant in any one of the 5 years (12-month period) following the date the unit resumes regular operation after the project, or in any one of the 10 years following that date, if the project involves increasing the emissions unit's design capacity or its potential to emit that regulated NSR pollutant and full utilization of the unit would result in a significant emissions increase or a significant net emissions increase at the major polluting facility. In determining the projected annual emissions before beginning actual construction, the owner or operator of the major polluting facility:

(A) Shall consider all relevant information, including but not limited to, historical operational data, the company's own representations, the company's expected business activity and the company's highest projections of business activity, the company's filings with the State or Federal regulatory authorities, and any compliance plans; and

(B) Shall include fugitive emissions to the extent quantifiable, and emissions associated with startups, shutdowns, and malfunctions; and,

(C) Shall exclude, in calculating any increase in emissions that results from the particular project, that portion of the unit's emissions following the project that an existing unit could have accommodated during the consecutive 24-month period used to establish the baseline actual emissions and that are also unrelated to the particular project, including any increased utilization due to product demand growth.

(10) REGULATED NSR POLLUTANT means for the purpose of this rule any of the following pollutants: Nitrogen oxides (NOx), and sulfur dioxide (SO_2) as $PM_{2.5}$ precursors, and $PM_{2.5}$.

(11) REVIEWING AUTHORITY as used in any definition found in 40CFR 51.165(a)(1), means the same as Executive Officer, as defined in District Rule 102.

(12) SIGNIFICANT means, in reference to a net emissions increase or the potential of a source to emit any of the following pollutants, a rate of emissions that would equal or exceed any of the following rates:

Nitrogen oxides: 40 tons per year
Sulfur dioxide: 40 tons per year
$PM_{2.5}$: 10 tons per year

(13) 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.

(c) Requirements

(1) The Executive Officer shall deny the Permit for a new major polluting facility; or major modification to a major polluting facility; or any modification to an existing facility that would constitute a major polluting facility in and of itself, unless each of the following requirements is met:

(A) Lowest Achievable Emission Rate (LAER) is employed for the new or relocated source or for the actual modification to an existing source; and

(B) Emission increases shall be offset at an offset ratio of 1.1:1 for $PM_{2.5}$ and the ratio required in Regulation XIII or Rule 2005 for NO_x and SO_2 as applicable; and

(C) Certification is provided by the owner/operator that all major 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; and

(D) An analysis is conducted of alternative sites, sizes, production processes, and environmental control techniques for such proposed source and demonstration made that the benefits of the proposed project outweigh the environmental and social costs associated with that project.

(2) At such time that a particular source or a source undergoing modification becomes a major polluting facility or major modification solely by virtue of a relaxation in any enforcement limitation which was established after June 3, 2011 on the capacity of the polluting facility or modification otherwise to emit $PM_{2.5}$ or its precursors to avoid applicability of this rule, such as a restriction on hours of operation, then the requirements of this rule shall apply to the source or modification as though construction had not yet commenced on the source or modification.

(3) Approval to construct shall not relieve any owner or operator of the responsibility to comply fully with applicable provisions of the permit and any other requirements under local, State, or Federal law.

(d) Emission Calculations

(1) Except as provided in subdivision (e) of this rule, and consistent with the definition of a major modification, a project is a major modification for a regulated NSR pollutant if it causes two types of emission increases—a significant emissions increase and a significant net emissions increase. The procedure for calculating whether a significant emissions increase will occur at the major polluting facility depends on the type of emissions units being modified, according to paragraphs (d)(2) through (d)(5). The procedure for calculating whether a significant net emissions increase will occur at the major polluting facility is contained in the definition of the term Net Emission Increase.

(2) Actual-to-projected-actual applicability tests for projects that only involve existing emissions units. A significant emissions increase of a regulated NSR pollutant is projected to occur if the sum of the difference between the projected actual emissions and the baseline actual emissions [as defined in sub-paragraph (b)(1)(A) and (b)(1)(B), as applicable] for each existing emissions unit, equals or exceeds the significant amount for that pollutant.

(3) Actual-to-potential tests for projects that only involve construction of a new emissions unit(s). A significant emissions increase of a regulated NSR pollutant is projected to occur if the sum of the difference between the potential to emit from each new emissions unit following completion of the project and the baseline actual emissions (as defined in sub-paragraph (b)(1)(C)) of these units before the project equals or exceeds the significant amount for that pollutant.

(4) Hybrid tests for projects that involve multiple types of emissions units. A significant emissions increase of a regulated NSR pollutant is projected to occur if the sum of the emissions increases for each emissions unit, using the method specified in paragraphs (d)(2) and (d)(3) as applicable with respect to each emissions units for each type of emissions unit equals or exceeds the significant amount for that pollutant.

(5) In lieu of using the method set out in paragraph (d)(2), the owner or operator of a major polluting facility may elect to use the emissions unit's potential to emit, in tons per year to determine if a significant emissions increase is projected to occur. For this purpose, the unit's potential to emit shall include fugitive emissions (to the extent quantifiable).

(e) Plantwide Applicability Limitation (PAL)

(1) Applicability

(A) The Executive Officer may approve the use of an actuals PAL for any existing major polluting facility if the PAL meets the requirements in paragraphs (e)(1) through (15) of this rule. The term "PAL" shall mean "actuals PAL" throughout subdivision (e) of this rule.

(B) Any physical change in or change in the method of operation of a major polluting facility that maintains its total source-wide emissions below the PAL level, meets the requirements in paragraphs (e)(1) through (e)(15) of this rule, and complies with the PAL permit:

(i) Is not a major modification for the PAL pollutant;

(ii) Is not subject to the provisions in subdivision (c) of this rule; and

(iii) Is not subject to the provisions in paragraph (c)(2) of this rule.

(C) Except as provided under clause (e)(1)(B)(iii), a major polluting facility shall continue to comply with all applicable Federal or State requirements, emission limitations, and work practice requirements that were established prior to the effective date of the PAL.

(2) Definitions. The following definitions in subparagraphs (e)(2)(A) through (K) apply for the purposes of subdivision (e) of this rule. When a term is not defined below, it shall have the meaning given in paragraph (b)(1) of this rule or in the Clean Air Act.

(A) ACTUALS PAL FOR A MAJOR POLLUTING FACILITY means a PAL based on the baseline actual emissions, of all emissions units at the source, that emit or have the potential to emit the PAL pollutant.

(B) ALLOWABLE EMISSIONS means "allowable emissions" as defined in 40CFR 51.165(a)(1)(xi), except as this definition is modified according to clauses (e)(2)(B(i) and (ii).

(i) The allowable emissions for any emissions unit shall be calculated considering any emission limitations that are enforceable as a practical matter on the emissions unit's potential to emit.

(ii) An emissions unit's potential to emit shall be determined using the definition in 40CFR 51.165(a)(1)(iii), except that the words "or enforceable as a practical matter" should be added after "federally enforceable."

(C) SMALL EMISSIONS UNIT means an emissions unit that emits or has the potential to emit the PAL pollutant in an amount less than the significant level for that PAL pollutant, as defined in paragraph (b)(12) of this rule or in the Clean Air Act, whichever is lower.

(D) MAJOR EMISSIONS UNIT means:

(i) Any emissions unit that emits or has the potential to emit 100 tons per year or more of the PAL pollutant in an attainment area; or

(ii) Any emissions unit that emits or has the potential to emit the PAL pollutant in an amount that is equal to or greater than the major source threshold for the PAL pollutant as defined by the Clean Air Act for non-attainment areas.

(E) PLANTWIDE APPLICABILITY LIMITATION (PAL) means an emission limitation expressed in tons per year, for a pollutant at a major polluting facility, that is enforceable as a practical matter and established source-wide in accordance with paragraphs (e)(1) through (e)(15) of this rule.

(F) PAL EFFECTIVE DATE generally means the date of issuance of the PAL permit. The PAL effective date for an increased PAL is the date any emissions unit which is part of the PAL major modification becomes operational and begins to emit the PAL pollutant.

(G) PAL EFFECTIVE PERIOD means the period beginning with the PAL effective date and ending 10 years later.

(H) PAL MAJOR MODIFICATION means any physical change in or change in the method of operation of the PAL source that causes it to emit the PAL pollutant at a level equal to or greater than the PAL.

(I) PAL PERMIT means the major NSR permit, the minor NSR permit, or the Title V permit issued by the Executive Officer that establishes a PAL for a major polluting facility.

(J) PAL POLLUTANT means the pollutant for which a PAL is established at a major polluting facility.

(K) SIGNIFICANT EMISSIONS UNIT means an emissions unit that emits or has the potential to emit a PAL pollutant in an amount that is equal to or greater than the significant level (as defined in paragraph (b)(12) of this rule or in the Clean Air Act, whichever is lower) for that PAL pollutant, but less than the amount that would qualify the unit as a major emissions unit as defined in subparagraph (e)(2)(D) of this rule.

(3) Permit application requirements

As part of a permit application requesting a PAL, the owner or operator of a major polluting facility shall submit the following information to the Executive Officer for approval:

(A) A list of all emissions units at the source designated as small, significant or major based on their potential to emit. In addition, the owner or operator of the source shall indicate which, if any, Federal or State applicable requirements, emission limitations or work practices apply to each unit.

(B) Calculations of the baseline actual emissions (with supporting documentation). Baseline actual emissions are to include emissions associated not only with operation of the unit, but also emissions associated with startup, shutdown and malfunction.

(C) The calculation procedures that the major polluting facility owner or operator proposes to use to convert the monitoring system data to monthly emissions and annual emissions based on a 12-month rolling total for each month as required by subparagraph (e)(13)(A) of this rule.

(4) General requirements for establishing PALs

(A) The Executive Officer may establish a PAL at a major polluting facility, provided that at a minimum, the requirements in sub-paragraph (e)(4)(A) of this rule are met.

(i) The PAL shall impose an annual emission limitation, in tons per year, that is enforceable as a practical matter, for the entire major polluting facility. For each month during the PAL effective period after the first 12 months of establishing a PAL, the major polluting facility owner or operator shall show that the sum of the monthly emissions from each emissions unit under the PAL for the previous 12 consecutive months is less than the PAL (a 12-month average, rolled monthly). For each month during the first 11 months from the PAL effective date, the major polluting facility owner or operator shall show that the sum of the preceding monthly emissions from the PAL effective date for each emissions unit under the PAL is less than the PAL.

(ii) The PAL shall be established in a PAL permit that meets the public participation requirements in paragraph (e)(5) of this rule.

(iii) The PAL permit shall contain all the requirements of paragraph (e)(7) of this rule.

(iv) The PAL shall include fugitive emissions, to the extent quantifiable, from all emissions units that emit or have the potential to emit the PAL pollutant at the major polluting facility.

(v) Each PAL shall regulate emissions of only one pollutant.

(vi) Each PAL shall have a PAL effective period of 10 years.

(vii) The owner or operator of the major polluting facility with a PAL shall comply with the monitoring, recordkeeping, and reporting requirements provided in paragraphs (e)(12) through (14) of this rule for each emissions unit under the PAL through the PAL effective period.

(B) At no time (during or after the PAL effective period) are emissions reductions of a PAL pollutant, which occur during the PAL effective period, creditable as decreases for purposes of generating offsets unless the level of the PAL is reduced by the amount of such emissions reductions and such reductions would be creditable in the absence of the PAL.

(5) Public participation requirement for PALs

Prior to the issuance of a new, renewed or increased PAL, the Executive Officer shall comply with the public participation requirements of District Rule 212(g). The Executive Officer must address all material comments before taking final action on the permit.

(6) Setting the 10-year actuals PAL level

(A) Except as provided in paragraph (e)(6)(B) of this rule, the actuals PAL level for a major polluting facility shall be established as the sum of the baseline actual emissions of the PAL pollutant for each emissions unit at the source; plus an amount equal to the applicable significant level for the PAL pollutant under paragraph (b)(12) of this rule or under the Act, whichever is lower. When establishing the actuals PAL level, for a PAL pollutant, only one consecutive 24-month period must be used to determine the baseline actual emissions for all existing emissions units. However, a different consecutive 24-month period may be used for each different PAL pollutant. Emissions associated with units that were permanently shut down after this 24-month period must be subtracted from the PAL level. The Executive Officer shall specify a reduced PAL level(s) (in tons/yr) in the PAL permit to become effective on the future compliance date(s) of any applicable Federal or State regulatory requirement(s) that the Executive Officer is aware of prior to issuance of the PAL permit.

(B) For newly constructed units (which do not include modifications to existing units) on which actual construction began after the 24-month period, in lieu of adding the baseline actual emissions as specified in sub-paragraph (f)(6)(A) of this rule, the emissions must be added to the PAL level in an amount equal to the potential to emit of the units.

(7) Contents of the PAL permit

The PAL permit shall contain, at a minimum, the following information.

(A) The PAL pollutant and the applicable source-wide emission limitation in tons per year.

(B) The PAL permit effective date and the expiration date of the PAL (PAL effective period).

(C) Specification in the PAL permit that if a major polluting facility owner or operator applies to renew a PAL in accordance with paragraph (e)(10) of this rule before the end of the PAL effective period, then the PAL shall not expire at the end of the PAL effective period. It shall remain in effect until a revised PAL permit is issued by the Executive Officer.

(D) A requirement that emission calculations for compliance purposes include emissions from startups, shutdowns and malfunctions.

(E) A requirement that, once the PAL expires, the major polluting facility is subject to the requirements of paragraph (e)(9) of this rule.

(F) The calculation procedures that the major polluting facility owner or operator shall use to convert the monitoring system data to monthly emissions and annual emissions based on a 12-month rolling total for each month as required by sub-paragraph (e)(13)(A) of this rule.

(G) A requirement that the major polluting facility owner or operator monitor all emissions units in accordance with the provisions under paragraph (e)(12) of this rule.

(H) A requirement to retain the records required under paragraph (e)(13) of this rule on site. Such records may be retained in an electronic format.

(I) A requirement to submit the reports required under paragraph (e)(14) of this rule by the required deadlines.

(J) Any other requirements that the Executive Officer deems necessary to implement and enforce the PAL.

(8) PAL effective period and reopening of the PAL permit

The PAL shall include the following information:

(A) PAL effective period. The Executive Officer shall specify a PAL effective period of 10 years.

(B) Reopening of the PAL permit.

(i) During the PAL effective period, the plan shall require the Executive Officer to reopen the PAL permit to:

(A) Correct typographical/calculation errors made in setting the PAL or reflect a more accurate determination of emissions used to establish the PAL.

(B) Reduce the PAL if the owner or operator of the major polluting facility creates creditable emissions reductions for use as offsets.

(C) Revise the PAL to reflect an increase in the PAL as provided under paragraph (e)(11) of this rule.

(ii) The Executive Officer may reopen the PAL permit for the following:

(A) Reduce the PAL to reflect newly applicable Federal requirements (for example, New Source Performance Standard) with compliance dates after the PAL effective date.

(B) Reduce the PAL consistent with any other requirement, that is enforceable as a practical matter, and that the State may impose on the major polluting facility under the District rules.

(C) Reduce the PAL if the Executive Officer determines that a reduction is necessary to avoid causing or contributing to a NAAQS or PSD increment violation, or to an adverse impact on an air quality related value that has been identified for a Federal Class I area by a Federal Land Manager and for which information is available to the general public.

(iii) Except for the permit reopening in paragraph (e)(8)(B)(i)(A) of this rule for the correction of typographical/calculation errors that do not increase the PAL level, all other re-openings shall be carried out in accordance with the public participation requirements of paragraph (e)(5) of this rule.

(9) Expiration of a PAL

Any PAL which is not renewed in accordance with the procedures in paragraph (e)(10) of this rule shall expire at the end of the PAL effective period, and the requirements in paragraph (e)(9) shall apply.

(A) Each emissions unit (or each group of emissions units) that existed under the PAL shall comply with an allowable emission limitation under a revised permit established according to the following procedures:

(i) Within the time frame specified for PAL renewals in sub-paragraph (e)(10)(B), the major polluting facility shall submit a proposed allowable emission limitation for each emissions unit (or each group of emissions units, if such a distribution is more appropriate as decided by the Executive Officer) by distributing the PAL allowable emissions for the major polluting facility among each of the emissions units that existed under the PAL. If the PAL had not yet been adjusted for an applicable requirement that became effective during the PAL effective period, as required under paragraph (e)(10)(E) of this rule, such distribution shall be made as if the PAL had been adjusted.

(ii) The Executive Officer shall decide whether and how the PAL allowable emissions will be distributed and issue a revised permit incorporating allowable limits for each emissions unit, or each group of emissions units, as the Executive Officer determines is appropriate.

(B) Each emissions unit shall comply with the allowable emission limitation on a 12-month rolling basis. The Executive Officer may approve the use of monitoring systems (source testing, emission factors, etc.) other than CEMS (Continuous emissions monitoring system), CERMS (Continuous emissions rate monitoring system), PEMS (Predictive emissions monitoring system) or CPMS (Continuous parameter monitoring system) to demonstrate compliance with the allowable emission limitation.

(C) Until the Executive Officer issues the revised permit incorporating allowable limits for each emissions unit, or each group of emissions units, as required under clause (e)(9)(A)(i) of this rule, the source shall continue to comply with a source-wide, multi-unit emissions cap equivalent to the level of the PAL emission limitation.

(D) Any physical change or change in the method of operation at the major polluting facility will be subject to the nonattainment major NSR requirements if such change meets the definition of major modification in paragraph (b)(3) of this rule.

(E) The major polluting facility owner or operator shall continue to comply with any State or Federal applicable requirements (BACT, RACT, NSPS, etc.) that may have applied either during the PAL effective period or prior to the PAL effective period except for those emission limitations that had been established pursuant to 40CFR 51.165 (a)(5)(ii), but were eliminated by the PAL in accordance with the provisions in paragraph (e)(1)(B)(iii) of this rule.

(10) Renewal of a PAL

(A) The Executive Officer shall follow the procedures specified in paragraph (e)(5) of this rule in approving any request to renew a PAL for a major polluting facility, and shall provide both the proposed PAL level and a written rationale for the proposed PAL level to the public for review and comment. During such public review, any person may propose a PAL level for the source for consideration by the Executive Officer.

(B) Application deadline. The plan shall require that a major polluting facility owner or operator shall submit a timely application to the Executive Officer to request renewal of a PAL. A timely application is one that is submitted at least 6 months prior to, but not earlier than 18 months from, the date of permit expiration. If the owner or operator of a major polluting facility submits a complete application to renew the PAL within this time period, then the PAL shall continue to be effective until the revised permit with the renewed PAL is issued.

(C) Application requirements. The application to renew a PAL permit shall contain the information required in paragraphs (e)(10)(C)(i) through (iv) of this rule.

(i) The information required in paragraphs (e)(3)(A) through (C) of this rule.

(ii) A proposed PAL level.

(iii) The sum of the potential to emit of all emissions units under the PAL (with supporting documentation).

(iv) Any other information the owner or operator wishes the Executive Officer to consider in determining the appropriate level for renewing the PAL.

(D) PAL adjustment. In determining whether and how to adjust the PAL, the Executive Officer shall consider the options outlined in paragraphs (e)(10)(D)(i) and (ii) of this rule. However, in no case may any such adjustment fail to comply with paragraph (e)(10)(D)(iii) of this rule.

(i) If the emissions level calculated in accordance with paragraph (e)(6) of this rule is equal to or greater than 80 percent of the PAL level, the Executive Officer may renew the PAL at the same level without considering the factors set forth in paragraph (e)(10)(D)(ii) of this rule; or

(ii) The Executive Officer may set the PAL at a level that it determines to be more representative of the source's baseline actual emissions, or that it determines to be appropriate considering air quality needs, advances in control technology, anticipated economic growth in the area, desire to reward or encourage the source's voluntary emissions reductions, or other factors as specifically identified by the Executive Officer in its written rationale.

(iii) Notwithstanding (e)(10)(D)(i) and (ii) of this rule,

(A) If the potential to emit of the major polluting facility is less than the PAL, the Executive Officer shall adjust the PAL to a level no greater than the potential to emit of the source; and

(B) The Executive Officer shall not approve a renewed PAL level higher than the current PAL, unless the major polluting facility has complied with the provisions of paragraph (e)(11) of this rule.

(E) If the compliance date for a State or Federal requirement that applies to the PAL source occurs during the PAL effective period, and if the Executive Officer has not already adjusted for such requirement, the PAL shall be adjusted at the time of PAL permit renewal or title V permit renewal, whichever occurs first.

(11) Increasing a PAL during the PAL effective period

(A) The plan shall require that the Executive Officer may increase a PAL emission limitation only if the major polluting facility complies with the provisions in clause (e)(11)(A)(i) through (e)(11)(A)(iv) of this rule.

(i) The owner or operator of the major polluting facility shall submit a complete application to request an increase in the PAL limit for a PAL major modification. Such application shall identify the emissions unit(s) contributing to the increase in emissions so as to cause the major polluting facility's emissions to equal or exceed its PAL.

(ii) As part of this application, the major polluting facility owner or operator shall demonstrate that the sum of the baseline actual emissions of the small emissions units, plus the sum of the baseline actual emissions of the significant and major emissions units assuming application of BACT equivalent controls, plus the sum of the allowable emissions of the new or modified emissions unit(s) exceeds the PAL. The level of control that would result from BACT equivalent controls on each significant or major emissions unit shall be determined by conducting a new BACT analysis at the time the application is submitted, unless the emissions unit is currently required to comply with a BACT or LAER requirement that was established within the preceding 10 years. In such a case, the assumed control level for that emissions unit shall be equal to the level of BACT or LAER with which that emissions unit must currently comply.

(iii) The owner or operator obtains a major NSR permit for all emissions unit(s) identified in paragraph (e)(11)(A)(i) of this rule, regardless of the magnitude of the emissions increase resulting from them. These emissions unit(s) shall comply with any emissions requirements resulting from the nonattainment major NSR program process (for example, LAER), even though they have also become subject to the PAL or continue to be subject to the PAL.

(iv) The PAL permit shall require that the increased PAL level shall be effective on the day any emissions unit that is part of the PAL major modification becomes operational and begins to emit the PAL pollutant.

(B) The Executive Officer shall calculate the new PAL as the sum of the allowable emissions for each modified or new emissions unit, plus the sum of the baseline actual emissions of the significant and major emissions units (assuming application of BACT equivalent controls as determined in accordance with paragraph (e)(11)(A)(ii)), plus the sum of the baseline actual emissions of the small emissions units.

(C) The PAL permit shall be revised to reflect the increased PAL level pursuant to the public notice requirements of paragraph (e)(5) of this rule.

(12) Monitoring requirements for PALs

(A) General requirements.

(i) Each PAL permit must contain enforceable requirements for the monitoring system that accurately determines plantwide emissions of the PAL pollutant in terms of mass per unit of time. Any monitoring system authorized for use in the PAL permit must be based on sound science and meet generally acceptable scientific procedures for data quality and manipulation. Additionally, the information generated by such system must meet minimum legal requirements for admissibility in a judicial proceeding to enforce the PAL permit.

(ii) The PAL monitoring system must employ one or more of the four general monitoring approaches meeting the minimum requirements set forth in paragraphs (e)(12)(B)(i) through (iv) of this rule and must be approved by the Executive Officer.

(iii) Notwithstanding paragraph (e)(12)(A)(ii) of this rule, a major polluting facility may also employ an alternative monitoring approach that meets paragraph (e)(12)(A)(i) of this rule if approved by the Executive Officer.

(iv) Failure to use a monitoring system that meets the requirements of this rule renders the PAL invalid.

(B) Minimum Performance Requirements for Approved Monitoring Approaches. The following are acceptable general monitoring approaches when conducted in accordance with the minimum requirements in paragraphs (e)(12)(C) through (I) of this rule:

(i) Mass balance calculations for activities using coatings or solvents;

(ii) CEMS;

(iii) CPMS or PEMS; and

(iv) Emission Factors.

(C) Mass Balance Calculations. An owner or operator using mass balance calculations to monitor PAL pollutant emissions from activities using coating or solvents shall meet the following requirements:

(i) Provide a demonstrated means of validating the published content of the PAL pollutant that is contained in or created by all materials used in or at the emissions unit;

(ii) Assume that the emissions unit emits all of the PAL pollutant that is contained in or created by any raw material or fuel used in or at the emissions unit, if it cannot otherwise be accounted for in the process; and

(iii) Where the vendor of a material or fuel, which is used in or at the emissions unit, publishes a range of pollutant content from such material, the owner or operator must use the highest value of the range to calculate the PAL pollutant emissions unless the Executive Officer determines there is site-specific data or a site-specific monitoring program to support another content within the range.

(D) CEMS. An owner or operator using CEMS to monitor PAL pollutant emissions shall meet the following requirements:

(i) CEMS must comply with applicable Performance Specifications found in 40 CFR part 60, appendix B; and

(ii) CEMS must sample, analyze and record data at least every 15 minutes while the emissions unit is operating.

(E) CPMS or PEMS. An owner or operator using CPMS or PEMS to monitor PAL pollutant emissions shall meet the following requirements:

(i) The CPMS or the PEMS must be based on current site-specific data demonstrating a correlation between the monitored parameter(s) and the PAL pollutant emissions across the range of operation of the emissions unit; and

(ii) Each CPMS or PEMS must sample, analyze, and record data at least every 15 minutes, or at another less frequent interval approved by the Executive Officer, while the emissions unit is operating.

(F) Emission factors. An owner or operator using emission factors to monitor PAL pollutant emissions shall meet the following requirements:

(i) All emission factors shall be adjusted, if appropriate, to account for the degree of uncertainty or limitations in the factors' development;

(ii) The emissions unit shall operate within the designated range of use for the emission factor, if applicable; and

(iii) If technically practicable, the owner or operator of a significant emissions unit that relies on an emission factor to calculate PAL pollutant emissions shall conduct validation testing to determine a site-specific emission factor within 6 months of PAL permit issuance, unless the Executive Officer determines that testing is not required.

(G) A source owner or operator must record and report maximum potential emissions without considering enforceable emission limitations or operational restrictions for an emissions unit during any period of time that there is no monitoring data, unless another method for determining emissions during such periods is specified in the PAL permit.

(H) Notwithstanding the requirements in paragraphs (e)(12)(C) through (G) of this rule, where an owner or operator of an emissions unit cannot demonstrate a correlation between the monitored parameter(s) and the PAL pollutant emissions rate at all operating points of the emissions unit, the Executive Officer shall, at the time of permit issuance:

(i) Establish default value(s) for determining compliance with the PAL based on the highest potential emissions reasonably estimated at such operating point(s); or

(ii) Determine that operation of the emissions unit during operating conditions when there is no correlation between monitored parameter(s) and the PAL pollutant emissions is a violation of the PAL.

(I) Re-validation. All data used to establish the PAL pollutant must be re-validated through performance testing or other scientifically valid means approved by the Executive Officer. Such testing must occur at least once every 5 years after issuance of the PAL.

(13) Recordkeeping requirements

(A) The PAL permit shall require an owner or operator to retain a copy of all records necessary to determine compliance with any requirement of paragraph (e) of this rule and of the PAL, including a determination of each emissions unit's 12-month rolling total emissions, for 5 years from the date of such record.

(B) The PAL permit shall require an owner or operator to retain a copy of the following records for the duration of the PAL effective period plus 5 years:

(i) A copy of the PAL permit application and any applications for revisions to the PAL; and

(ii) Each annual certification of compliance pursuant to title V and the data relied on in certifying the compliance.

(14) Reporting and notification requirements. The owner or operator shall submit semi-annual monitoring reports and prompt deviation reports to the Executive Officer in accordance with the applicable title V operating permit program. The reports shall meet the requirements in paragraphs (e)(14)(A) through (C).

(A) Semi-Annual Report. The semi-annual report shall be submitted to the Executive Officer within 30 days of the end of each reporting period. This report shall contain the information required in paragraphs (e)(14)(A)(i) through (vii) of this rule.

(i) The identification of owner and operator and the permit number.

(ii) Total annual emissions (tons/year) based on a 12-month rolling total for each month in the reporting period recorded pursuant to paragraph (e)(13)(A) of this rule.

(iii) All data relied upon, including, but not limited to, any Quality Assurance or Quality Control data, in calculating the monthly and annual PAL pollutant emissions.

(iv) A list of any emissions units modified or added to the major polluting facility during the preceding 6-month period.

(v) The number, duration, and cause of any deviations or monitoring malfunctions (other than the time associated with zero and span calibration checks), and any corrective action taken.

(vi) A notification of a shutdown of any monitoring system, whether the shutdown was permanent or temporary, the reason for the shutdown, the anticipated date that the monitoring system will be

fully operational or replaced with another monitoring system, and whether the emissions unit monitored by the monitoring system continued to operate, and the calculation of the emissions of the pollutant or the number determined by method included in the permit, as provided by paragraph (e)(12)(G) of this rule.

(vii) A signed statement by the responsible official (as defined by the applicable title V operating permit program) certifying the truth, accuracy, and completeness of the information provided in the report.

(B) Deviation report. The major polluting facility owner or operator shall promptly submit reports of any deviations or exceedance of the PAL requirements, including periods where no monitoring is available. A report submitted pursuant to 40CFR 70.6(a)(3)(iii)(B) shall satisfy this reporting requirement. The deviation reports shall be submitted within the time limits prescribed by District Rule 3004(g)(4). The reports shall contain the following information:

(i) The identification of owner and operator and the permit number;

(ii) The PAL requirement that experienced the deviation or that was exceeded;

(iii) Emissions resulting from the deviation or the exceedance; and

(iv) A signed statement by the responsible official (as defined by the applicable title V operating permit program) certifying the truth, accuracy, and completeness of the information provided in the report.

(C) Re-validation results. The owner or operator shall submit to the Executive Officer the results of any re-validation test or method within 3 months after completion of such test or method.

(15) Transition requirements

(A) The Executive Officer may not issue a PAL that does not comply with the requirements in paragraphs (e)(1) through (15) of this rule after the EPA has approved this rule as part of the California State Implementation Plan.

(f) Two Year Limit on Facility Exemption

Any facility, with accumulated emission increases in excess of 100 tons per year of $PM_{2.5}$ due to permit actions within any two-year period after June 3, 2011, shall offset the total emission increases during such period to zero.

(g) Recordkeeping Requirements

(1) If an owner or operator uses the calculation methods specified in paragraphs (d)(2) or (d)(4) of this rule to calculate projected actual emissions, and where there is a reasonable possibility, within the meaning of paragraph (g)(6) of this rule, that a project that is not a part of a major modification may result in a significant emissions increase of such pollutant, then before beginning actual construction of the project, the owner or operator shall document and maintain a record of the following information:

(A) A description of the project;

(B) Identification of the emissions unit(s) whose emissions of a regulated NSR pollutant could be affected by the project; and

(C) A description of the applicability test used to determine that the project is not a major modification for any regulated NSR pollutant, including the baseline actual emissions, the projected actual emissions, the amount of emissions excluded under paragraph (b)(9)(C) of this rule and an explanation for why such amount was excluded, and any netting calculations, if applicable.

(2) If the emissions unit is an existing electric utility steam generating unit, before beginning actual construction, the owner or operator shall provide a copy of the information set out in paragraph (g)(1) to the Executive Officer. Nothing in this paragraph shall be construed to require the owner or operator of such a unit to obtain any determination from the Executive Officer before beginning actual construction.

(3) The owner or operator shall monitor the emissions of any regulated NSR pollutant that could increase as a result of the project and that is emitted by any emissions units identified in paragraph (g)(1)(B); and calculate and maintain a record of the annual emissions, in tons per year on a calendar year basis, for a period of 5 years following resumption of regular operations after the change, or for a period of 10 years following resumption of regular operations after the change if the project increases the design capacity or potential to emit of that regulated NSR pollutant at such emissions unit.

(4) If the unit is an existing electric utility steam generating unit, the owner or operator shall submit a report to the Executive Officer within 60 days after the end of each year during which records must be generated under paragraph (g)(3) setting out the unit's annual emissions.

(5) If the unit is an existing unit other than an electric utility steam generating unit, the owner or operator shall submit a report to the Executive Officer if the annual emissions, in tons per year, from the project identified in paragraph (g)(1), exceed the baseline actual emissions (as documented and maintained pursuant to paragraph (g)(1)(C), by a significant amount (as defined in paragraph (b)(12) of this rule) for that regulated NSR pollutant, and if such emissions differ from the preconstruction projection as documented and maintained pursuant to paragraph (g)(1)(C). Such report shall be submitted to the Executive Officer within 60 days after the end of such year. The report shall contain the following:

(A) The name, address and telephone number of the major polluting facility;

(B) The annual emissions as calculated pursuant to paragraph (g)(3); and

(C) Any other information that the owner or operator wishes to include in the report (e.g., an explanation as to why the emissions differ from the preconstruction projection).

(6) A “reasonable possibility” occurs when the owner or operator calculates the project to result in either:

(A) A projected actual emissions increase of at least 50 percent of the amount that is a “significant emissions increase,” as defined under paragraph (b)(12) of this rule (without reference to the amount that is a significant net emissions increase), for the regulated NSR pollutant; or

(B) A projected actual emissions increase that, added to the amount of emissions excluded under paragraph (b)(9)(C), sums to at least 50 percent of the amount that is a “significant emissions increase,” as defined under paragraph (b)(12) of this rule (without reference to the amount that is a significant net emissions increase), for the regulated NSR pollutant. For a project for which a reasonable possibility occurs only within the meaning of paragraph (g)(6)(B) of this rule, and not also within the meaning of paragraph (g)(6)(A) of this rule, then provisions (g)(2) through (5) do not apply to the project.

(h) Test Methods

For the purpose of this rule only, testing for point sources of $PM_{2.5}$ shall be in accordance with U.S. EPA Test Methods 201A and 202.

(i) Exclusions

The provisions of Rule 1304 – Exemptions, Rule 1309.1 – Priority Reserve, and Rule 1315 – Federal New Source Review Tracking System do not apply for the purposes of this rule.

(Adopted November 5, 2010)

RULE 1420.1. EMISSIONS STANDARD FOR LEAD FROM LARGE LEAD-ACID BATTERY RECYCLING FACILITIES

(a) Purpose

(1) The purpose of this rule is to protect public health by reducing exposure and emissions of lead from large lead-acid battery recycling facilities, and to help ensure attainment of the National Ambient Air Quality Standard for Lead.

(b) Applicability

(1) This rule applies to all persons who own or operate a lead-acid battery recycling facility that has processed more than 50,000 tons of lead a year in any one of the five calendar years prior to November 5, 2010, or annually thereafter, hereinafter a large lead-acid battery recycling facility. Applicability shall be based on facility lead processing records required under subdivision (m) of this rule, and Rule 1420 – Emissions Standards for Lead. Compliance with this rule shall be in addition to other applicable rules such as Rule 1420.

(c) Definitions

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

(1) AGGLOMERATING FURNACE means a furnace used to melt flue dust that is collected from a lead control device, such as a baghouse, into a solid mass.

(2) AMBIENT AIR for purposes of this rule means outdoor air.

(3) BATTERY BREAKING AREA means the plant location at which lead-acid batteries are broken, crushed, or disassembled and separated into components.

(4) DRYER means a chamber that is heated and that is used to remove moisture from lead-bearing materials before they are charged to a smelting furnace.

(5) DRYER TRANSITION PIECE means the junction between a dryer and the charge hopper or conveyor, or the junction between the dryer and the smelting furnace feed chute or hopper located at the ends of the dryer.

(6) DUCT SECTION means a length of duct including angles and bends which is contiguous between two or more process devices (e.g., between a

furnace and heat exchanger; baghouse and scrubber; scrubber and stack; etc.).

(7) EMISSION COLLECTION SYSTEM means any equipment installed for the purpose of directing, taking in, confining, and conveying an air contaminant, and which at minimum conforms to design and operation specifications given in the most current edition of *Industrial Ventilation, Guidelines and Recommended Practices,* published by the American Conference of Government and Industrial Hygienists, at the time a complete permit application is on file with the District.

(8) FUGITIVE LEAD-DUST means any solid particulate matter containing lead that is in contact with ambient air and has the potential to become airborne.

(9) FURNACE AND REFINING/CASTING AREA means any area of a large lead-acid battery recycling facility in which:

(a) Smelting furnaces or agglomerating furnaces are located; or

(b) Refining operations occur; or

(c) Casting operations occur.

(10) LEAD-ACID BATTERY RECYCLING FACILITY means any facility, operation, or process in which lead-acid batteries are disassembled and recycled into elemental lead or lead alloys through smelting.

(11) LEAD means elemental lead, alloys containing elemental lead, or lead compounds, calculated as elemental lead.

(12) LEAD CONTROL DEVICE means any equipment installed in the ventilation system of a lead point source or emission collection system for the purposes of collecting and containing lead emissions.

(13) LEAD POINT SOURCE means any process, equipment, or total enclosure used in the lead-acid battery recycling operation, including, but not limited to, agglomerating furnaces, dryers, and smelting furnaces, that pass through a stack or vent designed to direct or control its exhaust flow prior to release to the atmosphere.

(14) LEEWARD WALL means the furthest exterior wall of a total enclosure that is opposite the windward wall.

(15) MAINTENANCE ACTIVITY means any of the following activities conducted outside of a total enclosure that generates fugitive lead-dust:

(a) building construction, renovation, or demolition;

(b) replacement or repair of refractory, filter bags, or any internal or

external part of equipment used to process, handle, or control lead-containing materials;

(c) replacement of any duct section used to convey lead-containing exhaust;

(d) metal cutting or welding that penetrates the metal structure of any equipment, and its associated components, used to process lead-containing material, such that lead dust within the internal structure or its components can become fugitive lead-dust; or

(e) resurfacing, repair, or removal of ground, pavement, concrete, or asphalt.

(16) MATERIALS STORAGE AND HANDLING AREA means any area of a large lead-acid battery recycling facility in which lead-containing materials including, but not limited to, broken battery components, reverberatory furnace slag, flue dust, and dross, are stored or handled between process steps. Areas may include, but are not limited to, locations in which materials are stored in piles, bins, or tubs, and areas in which material is prepared for charging to a smelting furnace.

(17) MEASURABLE PRECIPITATION means any on-site measured rain amount of greater than 0.01 inches in any complete 24-hour calendar day (i.e., midnight to midnight).

(18) PARTIAL ENCLOSURE for purposes of this rule means a structure comprised of walls or partitions on at least three sides or three-quarters of the perimeter that surrounds areas where maintenance activity is conducted, in order to prevent the generation of fugitive lead-dust.

(19) PROCESS means using lead or lead-containing materials in any operation including, but not limited to, the charging of lead-containing materials to smelting furnaces, lead refining and casting operations, and lead-acid battery breaking.

(20) RENOVATION for purposes of this rule means the altering of a building or permanent structure, or the removal of one or more of its components that generates fugitive lead-dust emissions.

(21) SENSITIVE RECEPTOR means any residence including private homes, condominiums, apartments, and living quarters; education resources such as preschools and kindergarten through grade twelve (k-12) schools; daycare centers; and health care facilities such as hospitals or retirement and nursing homes. A sensitive receptor includes long term care

hospitals, hospices, prisons, and dormitories or similar live-in housing.

(22) SLAG means the inorganic material by-product discharged, in molten state, from a lead smelting furnace that has a lower specific gravity than lead metal and contains lead compounds. This shall include, but not limited to, lead sulfate, lead sulfide, lead oxides, and lead carbonate consisting of other constituents charged to a smelting furnace which are fused together during the pyrometallurgical process.

(23) SMELTING means the chemical reduction of lead compounds to elemental lead or lead alloys through processing in high temperatures greater than 980° C.

(24) SMELTING FURNACE means any furnace where smelting takes place including, but not limited to, blast furnaces, reverberatory furnaces, rotary furnaces, and electric furnaces.

(25) TOTAL ENCLOSURE means a permanent containment building/structure, completely enclosed with a floor, walls, and a roof to prevent exposure to the elements, (e.g., precipitation, wind, run-on), with limited openings to allow access and egress for people and vehicles, that is free of cracks, gaps, corrosion, or other deterioration that could cause or result in fugitive lead-dust.

(26) WINDWARD WALL means the exterior wall of a total enclosure which is most impacted by the wind in its most prevailing direction determined by a wind rose using data required under paragraph (j)(5) of this rule, or other data approved by the Executive Officer.

(d) General Requirements

The owner or operator of a large lead-acid battery recycling facility shall be subject to the following requirements:

(1) Prior to January 1, 2012, emissions shall not be discharged into the atmosphere which contribute to ambient air concentrations of lead that exceed 1.5 micrograms per cubic meter ($\mu g/m^3$) pursuant to District Rule 1420.

(2) On and after January 1, 2012, emissions shall not be discharged into the atmosphere which contribute to ambient air concentrations of lead that exceed 0.15 $\mu g/m^3$ averaged over any 30 consecutive days. The ambient air concentrations of lead shall be determined by monitors pursuant to subdivision (j) or at any District-installed monitor.

(3) No later than July 1, 2011, install, maintain, and operate total enclosures pursuant to subdivision (e) and lead point source emission control devices pursuant to subdivision (f). The owner or operator of a large lead-acid battery recycling facility shall comply with both subparagraphs (d)(3)(A) and (d)(3)(B):

(A) Submit complete permit applications for all construction and necessary equipment within 30 days of November 5, 2010.

(B) Complete all construction within 180 days of receiving Permit to Construct approvals from the Executive Officer, or by July 1, 2011, whichever is earlier.

(C) The Executive Officer may approve a request for an extension of the compliance deadline date if the facility can demonstrate that it timely filed all complete permit applications and is unable to meet the deadline due to reasons beyond the facility's control. The request shall be submitted to the Executive Officer no less than 30 days before the compliance deadline date.

(4) On and after July 1, 2011 submit a Compliance Plan pursuant to subdivision (g) if emissions are discharged into the atmosphere which contribute to ambient air concentrations of lead that exceed 0.12 ($\mu g/m^3$) averaged over any 30 consecutive days determined by monitors pursuant to subdivision (j) or at any District-installed monitor.

(e) Total Enclosures

(1) Enclosure Areas

The owner or operator of a large lead-acid battery recycling facility shall enclose within a total enclosure the following areas in groups or individually:

(A) Battery breaking areas;

(B) Materials storage and handling areas, excluding areas where unbroken lead-acid batteries and finished lead products are stored;

(C) Dryer and dryer areas including transition pieces, charging hoppers, chutes, and skip hoists conveying any lead-containing material;

(D) Smelting furnaces and smelting furnace areas charging any lead-containing material;

(E) Agglomerating furnaces and agglomerating furnace areas charging

any lead-containing material; and

(F) Refining and casting areas.

(2) Total Enclosure Lead Emissions Control

The owner or operator of a large lead-acid battery recycling facility shall vent each total enclosure to an emission collection system that ducts the entire gas stream to a lead control device pursuant to subdivision (f).

(3) Total Enclosure Ventilation

Ventilation of the total enclosure at any opening including, but not limited to, vents, windows, passages, doorways, bay doors, and roll-ups shall continuously be maintained at a negative pressure of at least 0.02 mm of Hg (0.011 inches H_2O) measured pursuant to paragraph (e)(4).

(4) Digital Differential Pressure Monitoring Systems

The owner or operator of a large lead-acid battery recycling facility shall install, operate, and maintain a digital differential pressure monitoring system for each total enclosure as follows:

(A) A minimum of one building digital differential pressure monitoring system shall be installed and maintained at each of the following three walls in each total enclosure having a total ground surface area of 10,000 square feet or more:

(i) The leeward wall;

(ii) The windward wall; and

(iii) An exterior wall that connects the leeward and windward wall at a location defined by the intersection of a perpendicular line between a point on the connecting wall and a point on its furthest opposite exterior wall, and intersecting within plus or minus ten ($\pm$10) meters of the midpoint of a straight line between the two other monitors specified in clauses (e)(4)(A)(i) and (e)(4)(A)(ii). The midpoint monitor shall not be located on the same wall as either of the other two monitors described in clauses (e)(4)(A)(i) or (e)(4)(A)(ii).

(B) A minimum of one building digital differential pressure monitoring system shall be installed and maintained at the leeward wall of each total enclosure that has a total ground surface area of less than 10,000 square feet.

(C) Digital differential pressure monitoring systems shall be certified

by the manufacturer to be capable of measuring and displaying negative pressure in the range of 0.01 to 0.2 mm Hg (0.005 to 0.11 inches H_2O) with a minimum accuracy of plus or minus 0.001 mm Hg (0.0005 inches H_2O).

(D) Digital differential pressure monitoring systems shall be equipped with a continuous strip chart recorder or electronic recorder approved by the Executive Officer. If an electronic recorder is used, the recorder shall be capable of writing data on a medium that is secure and tamper-proof. The recorded data shall be readily accessible upon request by the Executive Officer. If software is required to access the recorded data that is not readily available to the Executive Officer, a copy of the software, and all subsequent revisions, shall be provided to the Executive Officer at no cost. If a device is required to retrieve and provide a copy of such recorded data, the device shall be maintained and operated at the facility.

(E) Digital differential pressure monitoring systems shall be calibrated in accordance with manufacturer's specifications at least once every 12 calendar months or more frequently if recommended by the manufacturer.

(F) Digital differential pressure monitoring systems shall be equipped with a backup, uninterruptible power supply to ensure continuous operation of the monitoring system during a power outage.

(5) In-draft Velocity

The in-draft velocity of the total enclosure shall be maintained at $\geq$ 300 feet per minute at any opening including, but not limited to, vents, windows, passages, doorways, bay doors, and roll-ups. In-draft velocities for each total enclosure shall be determined by placing an anemometer, or an equivalent device approved by the Executive Officer, at the center of the plane of any opening of the total enclosure.

(f) Lead Point Source Emissions Controls

(1) The owner or operator of a large lead-acid battery recycling facility shall vent emissions from each lead point source to a lead control device that meets the requirements of this subdivision and is approved by the Executive Officer.

(2) The total facility mass lead emissions from all lead point sources shall not

exceed 0.045 pounds of lead per hour. The maximum emission rate for any single lead point source shall not exceed 0.010 pounds of lead per hour. The total facility and maximum emission rates shall be determined using the most recent source tests conducted by the facility or the District.

(3) The owner or operator of a large lead-acid battery recycling facility shall install a secondary lead control device that controls lead emissions from the exhaust of the primary lead control device used for a dryer. The secondary lead control device shall be fitted with dry filter media, and the secondary lead control device shall only be used to vent the primary lead control device used for the dryer. An alternative secondary lead control method that is equally or more effective for the control of lead emissions may be used if a complete application is submitted as part of the permit application required under paragraph (d)(3) and approved by the Executive Officer.

(4) For any lead control device that uses filter media other than a filter bag(s), including, but not limited to, HEPA and cartridge-type filters, the filter(s) used shall be rated by the manufacturer to achieve a minimum of 99.97% capture efficiency for 0.3 micron particles.

(5) For any lead control device that uses a filter bag(s), the filter bag(s) used shall be polytetrafluoroethylene membrane-type, or any other material that is equally or more effective for the control of lead emissions, and approved for use by the Executive Officer.

(6) Each emission collection system and lead control device shall, at minimum, be inspected, maintained, and operated in accordance with the manufacturer's specifications.

(g) Compliance Plan

On and after July 1, 2011, the owner or operator of a large lead-acid battery recycling facility shall submit a Compliance Plan if emissions are discharged into the atmosphere which contribute to ambient air concentrations of lead that exceed 0.12 $\mu g/m^3$ averaged over any 30 consecutive days determined by monitors pursuant to subdivision (j) or at any District-installed monitor shall:

(1) Notify the Executive Officer in writing within 72 hours of when the facility knew or should have known of exceeding an ambient air lead concentration of 0.12 $\mu g/m^3$ averaged over any 30 consecutive days. Notification shall only be required for the first time the ambient air lead

concentration of 0.12 $\mu g/m^3$ is exceeded;

(2) Submit, within 30 calendar days of exceeding an ambient air lead concentration of 0.12 $\mu g/m^3$ averaged over any 30 consecutive days, a complete Compliance Plan to the Executive Officer for review and approval, subject to plan fees as specified in Rule 306. The Compliance Plan shall, at a minimum, include the following:

(A) A description of additional lead emission reduction measures to achieve the ambient lead concentration of 0.15 $\mu g/m^3$ averaged over any 30 consecutive days, as required under paragraph (d)(2), including, but not limited to, requirements for the following:

(i) Housekeeping, inspection, and maintenance activities;

(ii) Additional total enclosures;

(iii) Modifications to lead control devices;

(iv) Installation of multi-stage lead control devices;

(v) Process changes including reduced throughput limits; and

(vi) Conditional curtailments including, at a minimum, information specifying the curtailed processes, process amounts, and length of curtailment.

(B) The locations within the facility and method(s) of implementation for each lead reduction measure of subparagraph (g)(2)(A); and

(C) An implementation schedule for each lead emission reduction measure of subparagraph (g)(2)(A) to be implemented if lead emissions discharged from the facility contribute to ambient air concentrations of lead that exceed 0.15 $\mu g/m^3$ averaged over any 30 consecutive days measured at any monitor pursuant to subdivision (j) or at any District-installed monitor. The schedule shall also include a list of the lead reduction measures of subparagraph (g)(2)(A) that can be implemented immediately prior to plan approval.

(3) The Executive Officer shall notify the owner or operator in writing whether the Compliance Plan is approved or disapproved. Determination of approval status shall be based on, at a minimum, submittal of information that satisfies the criteria set forth in paragraph (g)(2). If the Compliance Plan is disapproved, the owner or operator shall resubmit the Compliance Plan, subject to plan fees specified in Rule 306, within 30 calendar days after notification of disapproval of the Compliance Plan.

The resubmitted Compliance Plan shall include any information necessary to address deficiencies identified in the disapproval letter. If the resubmitted Compliance Plan is denied, the operator or owner may appeal the denial by the Executive Officer to the Hearing Board under Rule 216 – Appeals and Rule 221 - Plans.

(4) The owner or operator shall implement measures based on the schedule in the approved Compliance Plan if lead emissions discharged from the facility contribute to ambient air concentrations of lead to exceed 0.15 $\mu g/m^3$ averaged over any 30 consecutive days measured at any monitor pursuant to subdivision (j) or at any District-installed monitor.

(5) The owner or operator may make a request to the Executive Officer to modify or update an approved Compliance Plan.

(h) Housekeeping Requirements

No later than 30 days after November 5, 2010, the owner or operator of a large lead-acid battery recycling facility shall control fugitive lead-dust by conducting all of the following housekeeping practices:

(1) Clean by wet wash or a vacuum equipped with a filter(s) rated by the manufacturer to achieve a 99.97% capture efficiency for 0.3 micron particles in a manner that does not generate fugitive lead-dust, the following areas at the specified frequencies, unless located within a total enclosure vented to a lead control device. Days of measurable precipitation in the following areas occurring within the timeframe of a required cleaning frequency may be counted as a cleaning:

(A) Monthly cleanings of roof tops on structures $\leq$ 45 feet in height that house areas associated with the storage, handling or processing of lead-containing materials; and

(B) Quarterly cleanings, no more than 3 calendar months apart, of roof tops on structures > 45 feet in height that house areas associated with the storage, handling or processing of lead-containing materials; and

(C) Weekly cleanings of all areas where lead-containing wastes generated from housekeeping activities are stored, disposed of, recovered or recycled.

(D) Initiate immediate cleaning, no later than one hour, after any maintenance activity or event including, but not limited to,

accidents, process upsets, or equipment malfunction, that causes deposition of fugitive lead-dust onto areas specified in subparagraph (h)(1)(A) through (h)(1)(C). Immediate cleanings of roof tops shall be completed within 72 hours if the facility can demonstrate that delays were due to safety or timing issues associated with obtaining equipment required to implement this requirement.

(2) Inspect all total enclosures and facility structures that house, contain or control any lead point source or fugitive lead-dust emissions at least once a month. Any gaps, breaks, separations, leak points or other possible routes for emissions of lead or fugitive lead-dust to ambient air shall be permanently repaired within 72 hours of discovery. The Executive Officer may approve a request for an extension beyond the 72-hour limit if the request is submitted before the limit is exceeded.

(3) Upon receipt, any lead-acid battery that is cracked or leaking shall be immediately sent to the battery breaking area for processing or stored pursuant to paragraph (h)(6).

(4) Pave, concrete, asphalt, or otherwise encapsulate all facility grounds as approved by the Executive Officer. Facility grounds used for plant life that are less than a total surface area of 100 square feet shall not be subject to encapsulation. Facility grounds requiring removal of existing pavement, concrete, asphalt or other forms of encapsulation, necessary for maintenance purposes shall not require encapsulation while undergoing work, and shall be re-encapsulated immediately after all required work is completed. All work shall be conducted in accordance with subdivision (i).

(5) Remove any weather cap installed on any stack that is a source of lead emissions.

(6) Store all materials capable of generating any amount of fugitive lead-dust including, but not limited to, slag and any other lead-containing waste generated from housekeeping requirements of subdivision (h) and maintenance activities of subdivision (i), in sealed, leak-proof containers, unless located within a total enclosure.

(7) Transport all materials capable of generating any amount of fugitive lead-dust including, but not limited to, slag and any other waste generated from housekeeping requirements of subdivision (h), within closed conveyor

systems or in sealed, leak-proof containers, unless located within a total enclosure.

(8) Initiate removal of any lead-containing material, including sludge, from the entire surface area of any surface impoundment pond or reservoir holding storm water runoff or spent water from housekeeping activities within 1 hour after the water level is $\leq$ 1 inch above the bottom of the pond or reservoir. Removal of lead-containing material is required to be completed as soon as possible, and no later than six calendar days after the time initiation of the removal was required. Thereafter, surfaces shall be washed down weekly in a manner that does not generate fugitive lead-dust until the pond or reservoir is used again for holding water.

(9) Maintain and Use an Onsite Mobile Vacuum Sweeper or Vacuum

The owner or operator of a large lead-acid battery recycling facility shall maintain an onsite mobile vacuum sweeper that is in compliance with District Rule 1186, or a vacuum equipped with a filter(s) rated by the manufacturer to achieve a 99.97% capture efficiency for 0.3 micron particles to conduct the following sweeping activities:

(A) Vacuum sweep all paved, concreted or asphalted facility areas subject to vehicular or foot traffic three times per day and occurring at least once per operating shift with each event not less than four hours apart, unless located within a total enclosure vented to a lead control device.

(B) Immediately vacuum sweep any area specified in subparagraph (h)(9)(A), no later than one hour after any maintenance activity or event including accidents, process upsets, or equipment malfunction that results in the deposition of fugitive lead-dust.

(C) Vacuum sweeping activities specified in paragraph (h)(9) shall not be required during days of measurable precipitation.

(i) Maintenance Activity

(1) Beginning November 5, 2010, the owner or operator of a large lead-acid battery recycling facility shall conduct any maintenance activity in a negative air containment enclosure, vented to a permitted negative air machine equipped with a filter(s) rated by the manufacturer to achieve a 99.97% capture efficiency for 0.3 micron particles, that encloses all affected areas where fugitive lead-dust generation potential exists, unless

located within a total enclosure or approved by the Executive Officer. Any maintenance activity that cannot be conducted in a negative air containment enclosure due to physical constraints, limited accessibility, or safety issues when constructing or operating the enclosure shall be conducted:

(A) In a partial enclosure, barring conditions posing physical constraints, limited accessibility, or safety issues;

(B) Using wet suppression or a vacuum equipped with a filter(s) rated by the manufacturer to achieve a 99.97% capture efficiency for 0.3 micron particles, at locations where the potential to generate fugitive lead-dust exists prior to conducting and upon completion of the maintenance activity. Wet suppression or vacuuming shall also be conducted during the maintenance activity barring safety issues;

(C) While collecting 24-hour samples at monitors for every day that maintenance activity is occurring notwithstanding paragraph (j)(2); and

(D) Shall be stopped immediately when instantaneous wind speeds are $\geq$ 25 mph. Maintenance work may be continued if it is necessary to prevent the release of lead emissions.

(2) Store or clean by wet wash or a vacuum equipped with a filter(s) rated by the manufacturer to achieve a 99.97% capture efficiency for 0.3 micron particles, all lead-contaminated equipment and materials used for any maintenance activity immediately after completion of work in a manner that does not generate fugitive lead-dust.

(j) Ambient Air Monitoring and Sampling Requirements

Prior to January 1, 2011, ambient air monitoring and sampling shall be conducted pursuant to District Rule 1420. No later than January 1, 2011, the owner or operator of a large lead-acid battery recycling facility shall conduct ambient air monitoring and sampling as follows:

(1) Collect samples from a minimum of four sampling sites. Locations for sampling sites shall be approved by the Executive Officer.

(A) Locations for sampling sites shall be based on maximum expected ground level lead concentrations, at or beyond the property line, as determined by Executive Officer-approved air dispersion modeling

calculations and emission estimates from all lead point sources and fugitive lead-dust sources, and other factors including, but not limited to, population exposure and seasonal meteorology.

(B) The Executive Officer may require one or more of the four sampling sites to be at locations that are not based on maximum ground level lead concentrations, and that are instead at locations at or beyond the property line that are representative of upwind or background concentrations.

(C) Sampling sites at the property line may be located just inside the fence line on facility property if logistical constraints preclude placement outside the fence line at the point of maximum expected ground level lead concentrations.

(2) Collect 24-hour, midnight-to-midnight, samples at all sites for 30 consecutive days from the date of initial sampling, followed by one 24-hour, midnight-to-midnight, sample collected at least once every three calendar days, on a schedule approved by the Executive Officer.

(3) Submit samples collected pursuant to paragraphs (j)(1) and (j)(2) to a laboratory approved under the SCAQMD Laboratory Approval Program for analysis within three calendar days of collection and calculate ambient lead concentrations for individual 24-hour samples within 15 calendar days of the end of the calendar month in which the samples were collected. Duplicate samples shall be made available and submitted to the District upon request by the Executive Officer.

(4) Sample collection shall be conducted using Title 40, CFR 50 Appendix B - *Reference Method for the Determination of Suspended Particulate Matter in the Atmosphere (High Volume Method)*, or U.S. EPA-approved equivalent methods, and sample analysis shall be conducted using Title 40, CFR 50 Appendix G - *Reference Method for the Determination of Lead in Suspended Particulate Matter Collected from Ambient Air*, or U.S. EPA-approved equivalent methods.

(5) Continuously record wind speed and direction data at all times using equipment approved by the Executive Officer at a minimum of one location and placement approved by the Executive Officer.

(6) Ambient air quality monitoring shall be conducted by persons approved by the Executive Officer and sampling equipment shall be operated and maintained in accordance with U.S. EPA-referenced methods.

(7) All ambient air quality monitoring systems required by this subdivision shall be equipped with a backup, uninterruptible power supply to ensure continuous operation of the monitoring system during a power outage.

(8) Cleaning activities including, but not limited to, wet washing and misting, that result in damage or biases to samples collected shall not be conducted within 10 meters of any sampling site required under this subdivision.

(9) On and after January 1, 2012, if the owner or operator of a large lead-acid battery recycling facility exceeds an ambient air lead concentration 0.15 $\mu g/m^3$ measured pursuant to paragraph (d)(2), the owner or operator shall:

(A) Begin daily ambient air monitoring and sampling no later than three calendar days of the time the facility knew or should have known of the exceedance. Conduct daily ambient air monitoring and sampling for sixty (60) consecutive days at each sampling site that measured an exceedance with paragraph (d)(2).

(B) The 60 consecutive-day period shall be restarted for any subsequent exceedance.

(k) Source Tests

(1) The owner or operator of a large lead-acid battery recycling facility shall conduct a source test of all lead point sources at least annually to demonstrate compliance with the control standards specified in subdivision (f). If the results of the most recent source test for a lead point source demonstrating compliance with the lead emission standard of subdivision (f) demonstrate emissions of 0.0025 pounds of lead per hour or less, the next test for that lead point source shall be performed no later than 24 months after the date of the most recent test.

(2) The owner or operator of a large lead-acid battery recycling facility with an existing lead control device in operation before November 5, 2010 shall conduct a source test for it no later than January 1, 2011. The owner or operator of a large lead-acid battery recycling facility with a new or modified lead control device with initial start-up on or after November 5, 2010 shall conduct the initial source test for it within 60 calendar days after initial start-up.

(3) Prior to the owner or operator of a large lead-acid battery recycling facility conducting a source test pursuant to paragraph (k)(1) or (k)(2), shall submit a pre-test protocol to the Executive Officer for approval at least 60

calendar days prior to conducting the source test. The pre-test protocol shall include the source test criteria of the end user and all assumptions, required data, and calculated targets for testing the following:

(A) Target lead control standard;

(B) Preliminary lead analytical data;

(C) Planned sampling parameters; and

(D) Information on equipment, logistics, personnel, and other resources necessary for an efficient and coordinated test.

(4) The owner or operator of a large lead-acid battery recycling facility shall notify the Executive Officer in writing one week prior to conducting any source test required by paragraph (k)(1) or (k)(2).

(5) The owner or operator of a large lead-acid battery recycling facility shall notify the Executive Officer within three business days, including Mondays, of when the facility knew or should have known of any source test result that exceeds any of the emission standards specified in paragraph (f)(2). Notifications shall be made to 1-800-CUT-SMOG.

(6) Source tests shall be conducted while operating at a minimum of 80% of equipment maximum capacity and in accordance with any of the following applicable test methods:

(A) SCAQMD Method 12.1 - *Determination of Inorganic Lead Emissions from Stationary Sources Using a Wet Impingement Train*

(B) ARB Method 12 – *Determination of Inorganic Lead Emissions from Stationary Sources*

(C) EPA Method 12 – *Determination of Inorganic Lead Emissions from Stationary Sources*

(D) ARB Method 436 – *Determination of Multiple Metal Emissions from Stationary Sources*

(7) The average of triplicate samples, obtained according to approved test methods specified in paragraph (k)(6), shall be used to determine compliance.

(8) The operator may use alternative or equivalent source test methods as defined in U.S. EPA 40 CFR 60.2, approved in writing by the Executive Officer, the Air Resources Board, and the U.S. EPA.

(9) The operator shall use a test laboratory approved under the SCAQMD Laboratory Approval Program for the source test methods cited in this

subdivision. If there is no approved laboratory, then approval of the testing procedures used by the laboratory shall be granted by the Executive Officer on a case-by-case basis based on SCAQMD protocols and procedures.

(10) When more than one source test method or set of source test methods are specified for any testing, the application of these source test methods to a specific set of test conditions is subject to approval by the Executive Officer. In addition, a violation established by any one of the specified source test methods or set of source test methods shall constitute a violation of the rule.

(11) An existing source test conducted on or after January 1, 2009 for lead control devices existing before November 5, 2010 may be used as the initial source test specified in paragraph (k)(1) to demonstrate compliance with the control standard of subdivision (f) upon Executive Officer approval. The source test shall meet, at a minimum, the following criteria:

(A) The test is the most recent conducted since January 1, 2009;

(B) The test demonstrated compliance with the control standard of subdivision (f); and

(C) The test is representative of the method to control emissions currently in use; and

(D) The test was conducted using applicable and approved test methods specified in paragraphs (k)(6), (k)(8), or (k)(9).

(l) New Facilities

The owner or operator of a large lead-acid battery recycling facility beginning construction or operations on or after November 5, 2010 shall:

(1) Demonstrate to the satisfaction of the Executive Officer that the facility is not located in an area that is zoned for residential or mixed use; and

(2) Demonstrate to the satisfaction of the Executive Officer that the facility is not located within 1,000 feet from the property line of a sensitive receptor, a school under construction, park, or any area that is zoned for residential or mixed use. The distance shall be measured from the property line of the new facility to the property line of the sensitive receptor.

(3) Submit complete permit applications for all equipment required by this rule prior to beginning construction or operations, and otherwise on or

before the time required by District rules.

(m) Recordkeeping

(1) The owner or operator of a large lead-acid battery recycling facility shall keep records of the following:

(A) Daily records indicating amounts of lead-containing material processed, including, but not limited to, purchase records, usage records, results of analysis, or other District-approved verification to indicate processing amounts;

(B) Results of all ambient air lead monitoring, meteorological monitoring, and other data specified by subdivision (j); and

(C) Records of housekeeping activities completed as required by subdivision (h), maintenance activities of subdivision (i), and lead control device inspection and maintenance requirements of paragraph (f)(6), including the name of the person performing the activity, and the dates and times on which specific activities were completed.

(D) Records of unplanned shutdowns of any smelting furnace including the date and time of the shutdown, description of the corrective measures taken, and the re-start date and time.

(2) The owner or operator of a large lead-acid battery recycling facility shall maintain all records for five years, at least two years onsite.

(n) Reporting

(1) Ambient Air Monitoring Reports

(A) Beginning no later than January 1, 2011, the owner or operator of a large lead-acid battery recycling facility shall report by the 15th of each month to the Executive Officer, the results of all ambient air lead and wind monitoring for each preceding month, or more frequently if determined necessary by the Executive Officer. The report shall include the results of individual 24-hour samples and 30-day averages for each day within the reporting period.

(B) Any exceedances of ambient air lead concentrations specified in paragraph (d)(2) shall be reported with a notification made to the 1-800-CUT-SMOG within 24 hours of receipt of the completed sample analysis required in paragraph (j)(3), followed by a written

report to the Executive Officer no later than three calendar days after the notification. The written report shall include the causes of the exceedance and the specific corrective actions implemented.

(2) Shutdown, Turnaround, and Maintenance Activity Notification

The owner or operator of a large lead-acid battery recycling facility shall:

(A) Notify the Executive Officer and the public within one hour after an unplanned shutdown of any lead control device has occurred. The notification shall include the associated processes or equipment vented by the shutdown lead control device. If the unplanned shutdown involves a breakdown pursuant to Rule 430, the breakdown notification report required by Rule 430 shall serve in lieu of this notification to the Executive Officer.

(B) Notify the Executive Officer and the public at least ten calendar days prior to a planned turnaround or shutdown of any smelting furnace, battery breaker, or lead control device that result in lead emissions. The notification shall specify the subject equipment and the start and end date of the turnaround or shutdown period.

(C) Notify the Executive Officer at least ten calendar days prior to the beginning of maintenance activity, as defined in paragraph (c)(15), that is conducted routinely on a monthly or less frequent basis. The notification and report required under subparagraph (n)(2)(E) shall include, at a minimum, the following:

(i) Dates, times, and locations of activities to be conducted;

(ii) Description of activities;

(iii) Name of person(s)/company conducting the activities;

(iv) Lead abatement procedures, including those specified in subdivision (i), to be used to minimize fugitive lead-dust emissions; and

(v) Date of expected re-start of equipment.

(D) Notify the public at least ten calendar days prior to the beginning of building construction, renovation, or demolition, and resurfacing, repair, or removal of ground pavement, concrete or asphalt if such activities are conducted outside of a total enclosure and generate fugitive lead-dust. The notification shall include, at a minimum, the following:

(i) Dates, times, and locations of activities to be conducted;

(ii) Description of activities;

(iii) Date of expected re-start of equipment.

(E) Provide the notification to the Executive Officer required under subparagraphs (n)(2)(A), (n)(2)(B), and (n)(2)(C) to 1-800-CUT-SMOG followed by a written notification report to the Executive Officer no later than three business days, including Mondays, after the unplanned shutdown occurred.

(F) Provide notification to the public required under subparagraphs (n)(2)(A), (n)(2)(B), and (n)(2)(D) through a facility contact or pre-recorded notification center that is accessible 24 hours a day, 7 days a week, and through electronic mail using a list of recipients provided by the Executive Officer. Another method of notification to the public may be used provided it is approved by the Executive Officer.

(G) Install a sign indicating the phone number for the facility contact or pre-recorded notification center that meets the following requirements, unless otherwise approved in writing by the Executive Officer:

(i) Installed within 50 feet of the main entrance of the facility and in a location that is visible to the public;

(ii) Measures at least 48 inches wide by 48 inches tall;

(iii) Displays lettering at least 4 inches tall with text contrasting with the sign background; and

(iv) Located between 6 and 8 feet above grade from the bottom of the sign.

(3) Initial Facility Status Report

(A) Initial Facility Status Report Due Date

The owner or operator of a large lead-acid battery recycling facility existing before November 5, 2010 shall submit an initial facility status report to the Executive Officer no later than January 1, 2011. Large lead-acid battery recycling facilities beginning construction or initial operations after November 5, 2010 shall submit the initial compliance status report upon start-up.

(B) The initial facility status report shall contain the information identified in Appendix 1.

(4) Ongoing Facility Status Report

The owner or operator of a large lead-acid battery recycling facility shall submit a summary report to the Executive Officer to document the ongoing facility status.

(A) Frequency of Ongoing Facility Status Reports

The report shall be submitted annually on or before February 1 for all sources and shall include information covering the preceding calendar year.

(B) The content of ongoing facility status reports shall contain the information identified in Appendix 2.

(5) Adjustments to the Timeline for Submittal and Format of Reports

The Executive Officer may adjust the timeline for submittal of periodic reports, allow consolidation of multiple reports into a single report, establish a common schedule for submittal of reports, or accept reports prepared to comply with other state or local requirements. Adjustments shall provide the same information and shall not alter the overall frequency of reporting.

(o) On and after July 1, 2011, if emission are discharged into the atmosphere which contribute to ambient air concentrations of lead that exceed 0.12 $\mu g/m^3$, averaged over any 30 consecutive days, determined by monitors pursuant to subdivision (j) or at any District-installed monitor, the owner or operator of a large lead-acid battery recycling facility shall submit a study addressing the technical, economic and physical feasibility of achieving a total facility mass lead emission rate of 0.003 pounds per hour from all lead point sources. The study shall be submitted within 30 calendar days after exceeding 0.12 $\mu g/m^3$, averaged over any 30 consecutive days.

Appendix 1 – Content of Initial Facility Status Reports

Initial compliance status reports shall contain, at a minimum, the following information:

1. Facility name, District Facility ID number, facility address, owner/operator name, and telephone number.
2. The distance from the property line of the facility to the property line of the nearest commercial/industrial building and sensitive receptor.
3. Worker and sensitive receptor locations, if they are located within one-quarter mile from the center of the facility.
4. Building parameters
    - Stack heights in feet (point sources); or
    - Building area in square feet (volume sources).
5. A description of the types of lead processes performed at the facility.
6. The following information shall be provided for each of the last five calendar years prior to November 5, 2010:
    - Annual amount of lead-containing material processed;
    - The maximum and average daily and monthly operating schedules;
    - The maximum and average daily and monthly lead-processing rates for all equipment and processes;
    - The maximum and average daily and annual emissions of lead from all emission points and fugitive lead-dust sources.
7. The approximate date of intended source tests for all lead control devices, as required by subdivision (k) of this rule.
8. Engineering drawings, calculations or other methodology to demonstrate compliance with paragraphs (d)(1) through (d)(3) and (k).
9. Air dispersion modeling calculations using procedures approved by the Executive Officer to determine the location of sampling sites as required by subdivision (j).
10. All information necessary to demonstrate means of compliance with subdivision (j).
11. The name, title, and signature of the responsible official certifying the accuracy of the report, attesting to whether the source has complied with the provisions of this rule.
12. The date of the report.

Appendix 2 – Content of Ongoing Facility Status Reports

Ongoing facility status reports shall, at a minimum, contain the following information:

1. Facility name, District Facility ID number, facility address, owner/operator name, and telephone number.
2. The beginning and ending dates of the calendar year for the reporting period.
3. The following information shall be provided for each of the last 12 calendar months of the reporting period:
    - Annual amounts of lead-containing material processed;
    - The maximum and average daily and monthly lead-processing rates for all equipment and processes;
    - The maximum and average daily and annual emissions of lead from all emission points and fugitive lead-dust sources.
4. Worker and sensitive receptor distances, if they are located within ¼ of mile from the center of the facility and facility maximum operating schedule, if changed since submittal of the initial compliance status report or prior year's ongoing compliance status and emission reports.
5. A description of any changes in monitoring, processes, or controls since the last reporting period.
6. The name, title, and signature of the responsible official certifying the accuracy of the report.
7. The date of the report.

(Adopted January 8, 1993)(Amended January 14, 1994)
(Amended February 11, 1994) (Amended October 13, 1995)
(Amended March 8, 1996)(Amended April 11, 1997)

RULE 1610. OLD-VEHICLE SCRAPPING

(a) Purpose

The purpose of this rule is to reduce motor vehicle volatile organic compounds (VOC), nitrogen oxides (NO_X), carbon monoxide (CO), and particulate matter (PM) exhaust emissions by issuing mobile source emission reduction credits in exchange for the scrapping of old, high emitting vehicles. Procurement of old vehicles could be accomplished by persons voluntarily giving up their vehicle for scrapping upon receiving an incentive payment. This rule provides a mechanism through which stationary source emissions can be brought into compliance with District regulations through mobile source emission reductions. Mobile source emission reduction credits (MSERCs) generated may only be applied towards compliance with designated rules with future compliance dates within District Regulation XI, Source Specific Standards; Regulation XV, Trip Reduction/Indirect Source; Regulation XIII, New Source Review; Regulation XX, Regional Clean Air Incentives Market (RECLAIM); or any other District regulations that allow the use of credits. MSERCs may not be applied towards compliance with federal requirements that do not authorize compliance through emissions trading including those promulgated by U.S. EPA as authorized under Title 42, U.S. Code Sections 7411, 7412(d), and those subsections of 7511b of the U.S. Code that do not authorize compliance through emissions trading. The value of these credits is based on old vehicles having at least three years useful remaining life prior to scrapping.

(b) Definitions

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

(1) MOBILE SOURCE EMISSION REDUCTION CREDIT (MSERC) means credit for real, quantified emission reductions, approved by the Executive Officer or designee, as authorized by this rule, and surplus to emission reductions required by ARB, District, and U.S. EPA regulations and the most recent District or U.S. EPA approved Air Quality Management Plan, whichever is more stringent.

(2) NITROGEN OXIDES (NO_X) means the sum of nitric oxides and nitrogen dioxides emitted, collectively expressed as nitrogen dioxide emissions.

(3) OLD-VEHICLE means 1981 and earlier model-year passenger cars and light-duty trucks.

(4) OLD-VEHICLE SCRAPPING PROGRAM means a program in which old vehicles are scrapped in exchange for MSERCs.

(5) SCAQMD LICENSED SCRAPPER means an entity certified by the Executive Officer or designee to generate MSERCs by scrapping vehicles, as authorized by this rule.

(6) SCRAPPING means the process by which a motor vehicle is permanently removed from service.

(7) VOLATILE ORGANIC COMPOUND (VOC) means any volatile compound of carbon, excluding: methane, carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates, ammonium carbonate, and exempt compounds as defined in District Rule 102.

(c) SCAQMD Licensed Scrapper Certification Requirements

(1) Certification as an SCAQMD licensed scrapper shall be limited to: VOC, NO_X, CO, or PM stationary emission sources subject to District Regulation XI, Source Specific Standards, rules with future compliance dates; Regulation XIII, New Source Review; Regulation XV, Trip Reduction/Indirect Source; or Regulation XX, RECLAIM.

(2) SCAQMD licensed scrappers shall have vehicles scrapped only by auto dismantlers that are licensed by the California Department of Motor Vehicles.

(3) All scrapping plans approved pursuant to paragraph (c)(5) shall require the scrapping of a minimum of 50 old vehicles within six months of the date of approval of the scrapping plan. MSERCs may not be issued for any old vehicles scrapped pursuant to a plan approved after the effective date of this amendment if at least fifty old vehicles have not been scrapped pursuant to the plan within six months of plan approval. Notwithstanding the foregoing, the minimum shall be 10 for the motion picture industry and in cases where the Executive Officer or designee determines that the minimum of 50 should be lowered because hardship has been demonstrated, e.g., if the amount of MSERCs that a facility needs is less than the number of MSERCs generated when 50 vehicles are scrapped.

(4) Entities intending to seek certification as an SCAQMD licensed scrapper shall submit a scrapping plan to the Executive Officer or designee at least one month prior to planned initiation of vehicle scrapping. The scrapping plan shall be submitted on forms specified by the Executive Officer or designee, and contain specific information including, but not limited to:

(A) information demonstrating the ability to comply with all provisions of this rule relating to vehicle selection, visual and functional inspection, disposal, and recordkeeping.

(B) the name and address of the California Department of Motor Vehicles licensed auto dismantler used to comply with paragraph (c)(2) (hereafter referred to as the DMV licensed auto dismantler), and a written statement from the auto dismantler certifying compliance with: local water conservation regulations; state, county, and city energy and hazardous materials response regulations; and local water agency soil, surface, and ground water contamination regulations.

(C) anticipated initiation date for scrapping program, and the anticipated use of the MSERCs.

(D) a description of the procedure to render the engine inoperable, if subparagraph (e)(2)(C) is employed by the SCAQMD Licensed Scrapper in lieu of subparagraph (e)(2)(A) or (e)(2)(B).

(i) The SCAQMD licensed scrapper shall demonstrate the procedure to the Executive Officer or designee.

(ii) Scrapping plans approved prior to March 8, 1996 shall be amended within 30 days prior to the start of the next vehicle scrapping program if the procedure will be utilized.

(5) Certification as an SCAQMD licensed scrapper shall occur with written approval of the scrapping plan by the Executive Officer or designee. Approval of the scrapping plan shall be based on information denoted in paragraph (c)(3) and subparagraphs (c)(4)(A) and (c)(4)(B). The Executive Officer or designee shall have one month to approve or disapprove the scrapping plan and shall disapprove the scrapping plan unless it complies with paragraph (c)(3) and subparagraphs (c)(4)(A) and (c)(4)(B). The Executive Officer or designee shall also disapprove the scrapping plan if the additional air pollutant emissions, caused by scrapping

vehicles in connection with this rule, exceed District significance thresholds.

(d) Notice Requirements for Vehicle Scrapping

SCAQMD licensed scrappers shall submit written notice to the Executive Officer or designee at least two weeks prior to vehicle scrapping, indicating date, location, and estimated number of vehicles to be scrapped.

(e) Vehicle Disposal Requirements

(1) At a minimum, scrapping shall entail the permanent destruction of the following vehicle components:

(A) Vehicle Identification Number

(B) License Plates

(C) Body/Frame

(2) The SCAQMD licensed scrapper or DMV licensed auto dismantler shall render the engine inoperable within ten days subsequent to possession of the old vehicle using any of the following procedures:

(A) permanent destruction of the cylinder block; or

(B) introduction of sand into the combustion chamber (the sand shall be introduced by removing spark plugs from two adjacent cylinders, pouring the sand into these cylinders, reinstalling the spark plugs, and attempting to start the engine. This procedure shall be deemed complete when the engine has seized); or

(C) an alternative procedure which renders the engine inoperable and which has been proposed by the scrapper or dismantler and is included in a plan submitted pursuant to subparagraph (c)(4)(D) approved by the Executive Officer or designee.

(3) Except for components listed in subparagraphs (e)(1)(A) through (e)(1)(C), removal of reusable components, e.g., doors, fenders, bumpers, subframes and disassembled engine components is allowed during the 90-day period subsequent to possession of the old vehicle by the SCAQMD licensed scrapper or DMV licensed auto dismantler.

(4) Vehicle components listed in subparagraphs (e)(1)(A) through (e)(1)(C) shall be permanently destroyed no later than 100 days subsequent to possession of the old vehicle by the SCAQMD licensed scrapper or DMV licensed auto dismantler.

(5) All activities associated with scrapping vehicles, including but not limited to the disposal of vehicle fluids and vehicle components, shall comply with applicable federal, state, and local laws, regulations, codes, and permitting requirements.

(f) Vehicle Selection Requirements

(1) Only 1981 and earlier model-year passenger cars and light-duty trucks ("old vehicles") shall be eligible for MSERCs through the old-vehicle scrapping program.

(2) To be eligible for MSERCs, old vehicles to be scrapped shall meet all of the following requirements.

(A) For at least two continuous years prior to scrapping, registration with the California Department of Motor Vehicles to one or more addresses located in the District.

(B) For at least two continuous years prior to scrapping, registration with Department of Motor Vehicles as an operable vehicle, except that registration as a nonoperable vehicle for up to two months cumulatively, occurring at least three months prior to scrapping, shall be acceptable under this subparagraph. Smog checks must be performed as required by Department of Motor Vehicles in order for the vehicle to be considered registered.

(C) Any person submitting a second or successive vehicle to any one Licensed Scrapper shall provide proof of continuous vehicle ownership and continuous registration as an operable vehicle in the District since January 1, 1992 as provided in subparagraph (f)(4)(A) and shall meet all functional and registration requirements of the Rule.

(D) The vehicle owner shall provide California Certificate of Title or DMV application for duplicate title.

(3) The requirements contained in subparagraph (f)(2)(B) shall be established through an inspection of Department of Motor Vehicles registration records by the SCAQMD Licensed Scrapper.

(4) The requirements contained in subparagraph (f)(2)(A) shall be established through a SCAQMD Licensed Scrapper inspection of documentation supplied by the vehicle owner(s). This documentation shall include the following.

(A) For vehicles that have been owned by one person for two continuous years prior to scrapping, the current vehicle registration card plus one additional document dated at least two years prior to scrapping shall be required. This additional document may be a previous vehicle registration card, a utility statement, a credit card statement, insurance invoice, a California Certificate of Title, California Drivers License, California Identification Card, canceled checks, or equivalent as determined by the Executive Officer or designee and shall contain certain information that has been preprinted by the original issuer of the document, including:

(i) at least one registered owner's name

(ii) registered owner's address that is located in the District

(iii) date prepared

(B) For vehicles with more than one owner during the two year period prior to scrapping, vehicle registration cards, California Certificate of Titles for the current owner and each previous owner, or equivalent documentation as determined by the Executive Officer or designee shall be required, verifying that the vehicle has been continuously registered to address(es) located in the District for the two year period prior to scrapping.

(g) Vehicle Visual and Functional Inspection

In order to be eligible for MSERCs, each vehicle to be scrapped shall pass a visual and functional inspection upon delivery to the DMV licensed auto dismantler. Inspections shall be conducted by the SCAQMD licensed scrapper. The following elements shall be included in the inspection.

(1) Vehicle must have been driven under its own power to scrapping site. If a SCAQMD Licensed Scrapper and/or District personnel has knowledge prior to the scrapping of a vehicle that (1) the vehicle was towed or pushed for any portion of the trip to the scrapping site, or (2) one or more items described in subparagraphs (g)(2)(A) through (g)(2)(C) occurred while the vehicle was being driven to the scrapping site, then the vehicle shall not be accepted for scrapping.

(2) The vehicle owner, or a person authorized by the vehicle owner, shall switch off the engine, restart the engine, and drive the vehicle in forward and reverse as directed by the SCAQMD Licensed Scrapper and/or District

personnel, and perform any other tests indicating operability if the preceding test procedure has not established operability, as directed by SCAQMD Licensed Scrapper and/or District personnel. The vehicle shall not be accepted by the SCAQMD Licensed Scrapper if the following occur:

(A) non-operation of the starter motor

(B) non-operation of the ignition switch

(C) non-operation of the vehicle transmission

(3) Vehicle identification numbers from the California Certificate of Title (if available), current vehicle registration card, and vehicle must be matched.

(4) Person(s) delivering vehicle to scrapping site must be verified as the vehicle owner(s). Additionally, the vehicle must not have any liens.

(5) The presence of the vehicle components originally supplied when the vehicle was new or functionally equivalent replacement components must be visually verified. The component inspection shall include, but not be limited to, the following:

(A) Exhaust system

(B) Bumpers

(C) Doors

(D) Fenders

(E) Side and quarter panels

(F) Hood and trunk lid

(G) Windshields and windows

(H) Seats

(I) Instrumentation and gauges

(h) Mobile Source Emission Reduction Credits Per Scrapped Vehicle

(1) Mobile source emission reduction credits shall be issued upon approval of the application pursuant to subdivision (k). The MSERCs shall be calculated according to the following formula:

$$MSERC = 3 \times [((SCRAP - REPLACE) \times MILESC)/454]/DF$$

Where:

MSERC = Mobile Source Emission Reduction Credit (total pounds of pollutant)

SCRAP	=	Emission rate of scrapped vehicle in grams per mile, according to paragraph (h)(2), based on the model-year of the scrapped vehicle.
MILESC	=	Average annual mileage corresponding to model-year of scrapped vehicle, according to paragraph (h)(3).
REPLACE	=	Average in-use vehicle emission rate in grams per mile for year in which vehicle is scrapped, according to paragraph (h)(4)
DF	=	Discount Factor, for the purpose of generating credits, equal to 1.0

(2) Emission Rates of Scrapped Vehicle for VOC, NOx, CO and PM (grams/mile):

Model-year Group	VOC	NOx	CO	PM
Pre-1972	12.4	4.0	69.5	0.04
1972-1974	9.7	3.8	46.4	0.04
1975-1981	3.9	3.0	36.1	0.01

(3) Average Annual Mileage of Scrapped Vehicles (miles)

Year	Annual Mileage
Pre-1972	4,900
1972-1974	5,300
1975-1981	6,400

(4) Average In-use Motor Vehicle Emission Rate (grams/mile) for 1993 calendar year, for VOC, NOx, CO and PM:

VOC	NOx	CO	PM	Usage
1.8	1.2	13.6	0.01	Average Vehicle Replaces Pre-1972 Vehicle
1.8	1.2	13.6	0.01	Average Vehicle Replaces 1972-1974 Vehicle
1.6	1.2	13.6	0.01	Average Vehicle Replaces 1975-1981 Vehicle

(5) Emission rates and annual mileage rates as shown in paragraphs (h)(2), (h)(3), (h)(4), and (h)(6) are based on ARB's EMFAC 7F emission factor model and BURDEN 7F vehicle activity model. These rates may be updated and published upon concurrence by ARB and District staffs, based on a revision to ARB's emission factor model. The Executive Officer shall submit any District Governing Board approved revisions to the emission

rates provided in this subdivision to U.S. EPA for inclusion into the State Implementation Plan.

(6) MSERCs per scrapped vehicle, as of October 13, 1995, shall be the following:

(A) Using a 1.2 Discount Factor, VOC, NO_X, CO and PM, Mobile Source Emission Reduction Credits Per Scrapped Vehicle (total pounds)

Vehicle Model-Year	VOC	NOx	CO	PM
Pre-1972	285	75	1500	0.8
1972-1974	233	75	950	0.9
1975-1981	80	63	800	0

(B) Using a 1.0 Discount Factor, VOC, NO_X, CO, and PM, Mobile Source Emission Reduction Credits Per Scrapped Vehicle (total pounds)

Vehicle Model-Year	VOC	NOx	CO	PM
Pre-1972	342	90	1800	1.0
1972-1974	279	90	1140	1.1
1975-1981	96	75	960	0

(7) MSERCs generated from vehicle scrapping activities shall be valid for five years from the date of application approval pursuant to subdivision (k), with the limitation that no more than one-third of the MSERCs may be consumed within one year from the date of approval and not more than two-thirds of the MSERCs may be consumed within two years from the date of approval. This paragraph shall also apply to credits that have been issued for vehicle scrapping activities prior to October 13, 1995 provided that these credits have not expired or have not been consumed.

(i) Use of MSERCs

(1) MSERCs may be used for any of the following applications:

(A) As RECLAIM Trading Credits in accordance with Rule 2008.

(B) As an alternative method of compliance with District Regulation XI rules that have future compliance dates. MSERCs shall not be used

to offset emission increases caused by the removal of emission control equipment or replacement of compliant with noncompliant materials subject to Regulation XI.

(C) As an alternative method of compliance with District Regulation XV rules that allow the use of MSERCs. MSERCs generated from vehicle scrapping activities occurring before October 13, 1995, may be used by any entity pursuant to this subparagraph.

(D) As New Source Review (NSR) offsets for emission increases at new or modified facilities that are subject to Rule 1303 (b)(2) pursuant to provisions in Regulation XIII. Pursuant to Rule 504, no variance or series of variances, including emergency and interim variances, shall be granted for a period in excess of 90 days from the initial granting of a variance, from a permit condition implementing a Regulation XIII offset requirement if such permit condition is based upon the use of MSERCs.

(E) For voluntary retirement of MSERCs for air quality benefits.

(F) As an alternative method of compliance with any other District regulations which allow the use of credits.

(2) For the purpose of using MSERCs pursuant to subparagraphs (i)(1)(A) and (i)(1)(B), a discount factor equal to 1.2 shall be applied. For the purpose of using MSERCs pursuant to subparagraphs (i)(1)(C) and (i)(1)(D), a discount factor equal to 1.0 shall be applied. For all other uses pursuant to subparagraph (i)(1)(F), a discount factor equal to 1.0 shall be applied unless specified otherwise in District regulations.

(3) Scrapping plans currently being implemented as of October 13, 1995, for the purpose of delaying compliance of Regulation XI rules shall be permitted to complete their implementation.

(4) MSERCs may only be transferred as permitted by Rule 1501.1 or Regulation XX, except that SCAQMD Licensed Scrappers that are not subject to either District Regulation XI or Rule 1301(b)(2) may also transfer MSERCs to other entities that were SCAQMD Licensed Scrappers as of the date the MSERCs were generated.

(5) MSERCs shall only be consumed in the air basin corresponding to the registered address of the old vehicle, prior to the DMV licensed auto

dismantler or SCAQMD Licensed Scrapper taking possession of the vehicle.

(j) Recordkeeping Requirements

(1) SCAQMD licensed scrappers shall maintain a copy of the scrapping plan described in subdivision (c) and the notices given pursuant to subdivision (d) for one year following termination of vehicle scrapping.

(2) The following information shall also be collected and maintained in written records by the SCAQMD licensed scrapper for one year following termination of vehicle scrapping:

(A) Starting and ending dates of the old-vehicle scrapping program.

(B) Number of vehicles scrapped.

(C) Dates vehicles were scrapped.

(D) Complete name, address, and telephone number of the person conducting the old-vehicle scrapping program.

(E) Complete name, address, and telephone number of the auto dismantler and any program subcontractors.

(F) A detailed description of project organizational structure and logistical arrangements, including location(s) of collection and disposal facilities, and scrapping procedure including disposal procedures for all vehicle components and fluids.

(3) SCAQMD licensed scrappers shall be responsible for storing and maintaining computer accessible data records of scrapped vehicles.

(4) The computer hardware, software, and communications protocol, to be used for storing and maintaining computer accessible data records, shall be specified by the Executive Officer or designee for compatibility with existing District computer related equipment.

(5) Data records for each scrapped vehicle shall include the following:

(A) Vehicle make

(B) Vehicle model

(C) Vehicle model-year

(D) Vehicle license plate number

(E) Vehicle identification number

(F) Vehicle mileage

(G) Scrapped vehicle owner's name, address, telephone number, and driver license number

(H) Date of scrapping

(I) VOC, NO_X, CO, and PM mobile source emission reduction credit

(J) Name of person(s) conducting vehicle visual and functional inspection as required by subdivision (g), with employer's name, address, and telephone number.

(6) Data records shall be made accessible to the Executive Officer or designee for a minimum of one year subsequent to the issuance of MSERCs for each scrapped vehicle.

(7) In addition to data records pursuant to (j)(5), for each vehicle scrapped, the SCAQMD licensed scrapper shall maintain and make accessible to the Executive Officer or designee upon request the following for a minimum of one year subsequent to the issuance of MSERCs for each scrapped vehicle:

(A) A duplicate copy of Report of Vehicle to be Dismantled and Notice of Acquisition (California Department of Motor Vehicles Registration 42 Form) validated by line date stamping on the front of the form.

(B) Copy of documentation, pursuant to paragraphs (f)(3) and (f)(4), and subparagraph (f)(2)(D).

(C) Copy of California Certificate of Title or DMV application for duplicate title for each scrapped vehicle.

(k) Issuance of MSERCs

(1) SCAQMD licensed scrappers shall submit an application to the Executive Officer or designee every six months following certification as an SCAQMD licensed scrapper. The purpose of the application is to document the number of vehicles scrapped and MSERCs earned during the six month period, and demonstrate compliance with rule requirements.

(2) The application shall contain the following information for each six month period:

(A) Data records for vehicles scrapped;

(B) Total MSERCs claimed for scrap program period;

(3) MSERCs shall be issued after the Executive Officer or designee has approved the application pursuant to paragraph (k)(1). The application shall be disapproved unless it demonstrates the SCAQMD licensed scrapper has complied with all applicable provisions in this regulation, as determined by the Executive Officer or designee.

(4) For the purposes of assessing fees, the application shall be deemed a plan, and the fees shall be assessed in accordance with the provisions of Rule 306.

(5) The application, including data records, shall be stored by the Executive Officer or designee for a minimum of five years.

(l) Compliance Plan

(1) In order to use MSERCs for the application listed in subparagraphs (i)(1)(B), (i)(1)(D), and (i)(1)(F), the user shall submit a Rule 1610 compliance plan to the Executive Officer or designee. The purpose of the compliance plan is to demonstrate compliance with rule requirements, and specify the use of the MSERCs.

(2) The compliance plan shall contain the following information:

(A) Total MSERCs (attach certificates)

(B) Identification of the specific rule for which the alternative method of compliance is sought;

(C) The period of time for the alternative method of compliance;

(D) Number of MSERCs used to substantiate the alternative method of compliance;

(E) A quantification of emissions that would result from noncompliance with the rule identified in subparagraph (l)(2)(B), and documentation supporting the emissions quantification.

(i) This quantification shall be performed using District Governing Board approved quantification methodologies.

(ii) The Executive Officer shall submit this rule and associated quantification methodologies to U.S. EPA for inclusion into the State Implementation Plan.

(3) Supporting documentation (applicable for MSERC usage for Regulation XI rules) shall include, but is not limited to:

(A) a listing of equipment and/or materials that are the source of noncompliant VOC, NOx, CO, or PM emissions associated with the rule identified in subparagraph (l)(2)(B).

(B) a description and operating conditions of equipment listed in subparagraph (l)(3)(A) and/or composition and rate of use of materials listed in subparagraph (l)(3)(A).

(C) emission rates associated with the use of equipment and/or materials listed in subparagraph (l)(3)(A).

(D) a listing of equipment and/or materials that would result in compliance with the rule identified in subparagraph (l)(2)(B).

(E) a description and operating conditions of equipment listed in subparagraph (l)(3)(D) and/or composition and rate of use of materials listed in subparagraph (l)(3)(D).

(F) emission rates associated with the use of equipment and/or materials listed in subparagraph (l)(3)(D).

(4) The compliance plan shall be written on a form to be specified by the Executive Officer or designee.

(5) The Executive Officer or designee shall approve or disapprove the compliance plan. The plan shall be disapproved unless it demonstrates that an equivalent amount of emissions reductions are obtained through the alternative method of compliance.

(6) MSERCs may not be used as an alternative method of compliance with Regulation XI rules until the Executive Officer or designee has approved the compliance plan.

(7) The user must renew the compliance plan prior to the expiration of the MSERCs upon which the plan is based.

(8) The compliance plan, including supporting documentation, shall be stored by the Executive Officer or designee for a minimum of five years.

(m) Compliance Auditing and Enforcement

(1) The Executive Officer or designee may audit any files and/or records created to comply with recordkeeping requirements.

(2) The Executive Officer or designee shall reserve the right to inspect facilities, including auto dismantlers, for compliance with the requirements specified in this rule. District inspectors shall be afforded immediate access to scrapping/dismantling facilities on request.

(3) Violation of any provision of this rule, including falsification of information in the scrapping plan, application, or compliance plan, shall be grounds for the Executive Officer or designee to disallow or void any MSERCs resulting from or associated with the violation, by disapproving or seeking revocation of the compliance plan (as appropriate), and shall be subject to

the penalties specified in the Health and Safety Code for violation of District rules.

(n) Requirements for Public Notice

Following a completeness determination of the scrapping plan for the use of MSERCs as NSR offsets only, as provided in subparagraph (i)(1)(D), the Executive Officer or designee shall:

(1) perform the evaluations required to determine compliance with this regulation and make a preliminary written decision, as appropriate, as to whether or not MSERCs, to be used as emission reduction credits (ERCs), should be approved or disapproved. The decision shall be supported by a succinct written analysis; and

(2) publish a notice by prominent advertisement in at least one newspaper of general circulation in the District stating the preliminary decision of the Executive Officer or designee and where the public may inspect the information. The notice shall provide 30 days from the date of publication for the public to submit written comments on the preliminary decision; and

(3) at the time notice of the preliminary decision is published, make available for public inspection at the District office the information submitted by the applicant, the supporting analysis for the preliminary decision, and the preliminary decision to grant or deny MSERCs and the reasons therefore. The confidentiality of trade secrets shall be maintained in accordance with Section 6254.7 of the Government Code.

(o) Appeal of Disapproval of MSERC Issuance

An applicant may, within 30 days of receipt of notice of disapproval, request the Hearing Board to hold a hearing on whether the scrapping application was properly refused.

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

(Adopted March 16, 2001)

RULE 1612.1 - MOBILE SOURCE CREDIT GENERATION PILOT PROGRAM

(a) Purpose

The purpose of this rule is to provide opportunities to generate NO_x mobile source emission reduction credits (MSERCs) for use in RECLAIM through the voluntary replacement of diesel-fueled heavy-duty vehicles or yard hostlers, with clean technologies.

(b) Applicability

(1) This rule applies to persons who voluntarily elect to generate NO_x MSERCs, for use in RECLAIM pursuant to Rule 2008 – Mobile Source Credits through the replacement of diesel-fueled heavy-duty Class 7 or 8 captive vehicles, or yard hostlers operated exclusively within the district with new similar-type vehicles using clean technologies.

(2) This rule does not apply to any:

(A) emission reductions produced by monies from any public air quality related funding program including but not limited to Rule 2202, the Carl Moyer Memorial Air Quality Standards Attainment Program, or AB2766 funding;

(B) emission reductions required pursuant to any law, rule, or regulation, or legal instrument such as a legal settlement or consent decree; or

(C) vehicle that is subject to the requirements of any Rule 1190 series rule.

(c) Definitions

(1) ACTIVITY LEVEL (AL) means the number of miles traveled, fuel consumed, or hours of operation per year within the District.

(2) APPLICATION means the Rule 1612.1 MSERC Application as specified in subdivision (e).

(3) BASELINE EMISSION FACTOR (EF_{base}) means the emission factor used to quantify annual emissions from a new diesel-fueled heavy-duty vehicle or yard hostler that would have been purchased if the clean technology powered vehicle was not purchased.

(4) CAPTIVE VEHICLE means a heavy-duty Class 7 or 8 diesel-fueled on-road vehicle that is operated exclusively within the district during the credit generation period and provides a service other than transporting passengers, with the exception of vehicle maintenance that requires the vehicle to be serviced outside of district boundaries one-time per calendar year and the vehicle is not hauling or transporting freight upon leaving and returning to the district.

(5) CLEAN TECHNOLOGIES means any low-emission technology certified by CARB using compressed or liquefied natural gas, liquefied petroleum gas, electric power, or dual-fueled engines.

(6) CREDIT GENERATION PERIOD means the timeframe that MSERCs are being generated and begins on the date that the requirements of subdivision (d) are met and can extend no longer than the lifetime of the original replacement vehicle, except as provided in subdivision (i).

(7) CREDIT ISSUANCE PERIOD means the timeframe for which MSERCs are issued and begins on the date that the requirements of subdivision (h) are met.

(8) DIESEL FUEL means any fuel that is commonly known as diesel fuel No. 1-D or 2-D, or meets the specifications in ASTM D 975, Standard Specifications for Diesel Fuel Oils.

(9) DISTRICT means the geographical area defined by Rule 103 – Definition of Geographical Area.

(10) DUAL-FUEL ENGINE means an engine that is designed to operate simultaneously on compressed or liquefied natural gas and diesel fuel.

(11) EVALUATION YEAR means the first year and subsequent years thereafter as determined pursuant to paragraph (g)(3) during which the AQMD, CARB, and EPA will assess whether MSERCs may continue to be generated or if a portion or all future MSERCs need to be discontinued or discounted to ensure credits remain surplus.

(12) HEAVY-DUTY CLASS 7 OR 8 VEHICLE means any on-road vehicle having a gross vehicle weight of greater than 26,000 pounds.

(13) MOBILE SOURCE EMISSION REDUCTION CREDIT (MSERC) means for the purpose of this rule, emission reduction credits that meet the requirements of this rule and are issued as specified in subdivision (h).

(14) OPTIONAL EMISSION FACTOR (EFopt) means the emission factor certified by CARB used to quantify annual emissions for the replacement vehicle.

(15) RECLAIM FACILITY means any stationary source subject to Regulation XX, pursuant to Rule 2001 - Applicability.

(16) REFUSE COLLECTION VEHICLE means any heavy-duty Class 7 or 8 vehicle used expressly for collecting solid waste from residential or commercial establishments and generally operates on fixed routes.

(17) REPLACEMENT OR REPLACE means for the purpose of this rule, the complete removal of a preexisting vehicle from service and substitution with a vehicle using a clean technology.

(18) RETIRE OR RETIRED means that the credit, regardless of the expiration date of the credit, can no longer be transferred or used.

(19) SURPLUS means that emission reductions achieved throughout the duration of the emission reduction activity that are not required or relied upon by any local, state, or federal rule, or regulation, and the federal Clean Air Act; and are not required or relied upon in an attainment demonstration, reasonable further progress demonstration, or emissions inventory thereby ensuring that there is no double counting of emission reductions.

(20) VEHICLE means for the purpose of this rule, either a heavy-duty Class 7 or 8 captive vehicle, including a refuse collection vehicle, or a yard hostler subject to this rule.

(21) YARD HOSTLER means a tractor less than 300 hp which is used to transfer semi-truck or tractor-trailer containers in and around storage, transfer, or distribution yards or areas and is often equipped with a hydraulic lifting fifth wheel for connection to trailer containers.

(d) Credit Generator Requirements

Any person who elects to generate MSERCs under this rule shall meet the following requirements:

(1) Replace existing diesel-fueled vehicles with new vehicles of similar vehicle type, performing a similar

function, powered by clean technologies where the engines are certified to meet a CARB NO_x optional credit standard that is at or below the NO_x maximum optional emission factors shown in Table 1 – Evaluation Year and NO_x Baseline and Optional Emission Factors;

(2) Demonstrate that the purchase contract for acquisition of the new replacement vehicles is signed no earlier than January 1, 2001 and that vehicle deliveries do not occur prior to March 16, 2001;

(3) Demonstrate that the new replacement vehicles are captive vehicles;

(4) Submit an Application as specified in subdivision (e); and

(5) Demonstrate compliance with the monitoring, recordkeeping, and reporting requirements specified in subdivision (j).

(e) Application

(1) Any person who elects to generate MSERCs under this rule shall submit an Application to the District no later than 30 days after delivery of the replacement vehicles and before January 1, 2004 unless otherwise determined by both CARB and EPA to be before January 1, 2003. The Application shall include the following:

(A) A description of the replacement project, including, at a minimum, the vehicle model(s), model year(s), and applicable conversion factors, and baseline and optional emission factors;

(B) The county or counties where the replacement vehicle will be used during the credit generation period;

(C) The location where the replacement vehicle is parked or garaged when not in service;

(D) The initial service date of each new replacement vehicle which is a date after the existing diesel-fueled vehicle is replaced that would represent the beginning of the credit generation period;

(E) Documentation showing the date of purchase for the new replacement vehicle such as a signed purchase agreement;

(F) Identification of the intended user(s) of the MSERCs, if available;

(G) The historical annual average activity level for replaced captive vehicles for the previous calendar two-year period; and

(H) Designation of the RECLAIM Compliance Cycle for each vehicle for the initial and each annual credit generation period for the entire credit generation period.

(I) The projected activity level for the initial credit generation period and the projected annual activity level after the initial credit generation period which coincides with either RECLAIM Compliance Cycle 1 or 2, up to the evaluation year, not to exceed a five-year credit generation period. The projected activity level for any single new replacement vehicle should not exceed 120% of the most recent two-year historical annual average activity level specified in subparagraph (e)(1)(G).

(2) If the initial service date, as specified in subparagraph (e)(1)(D) of the new replacement vehicle is before the Application is approved, the Application shall include the following additional information:

(A) Proof of delivery for the new replacement vehicles;

(B) Proof of transfer of ownership of the replaced vehicles with the location and identity of the new owner(s), along with a copy of a written notification informing the new owner that the replaced vehicle must not be operated, sold, or otherwise transferred or delivered in the district or in Ventura or Santa Barbara Counties;

(C) Proof of removal from service for the replaced vehicles which are not sold or otherwise transferred to a new owner by providing a Certificate of Planned Non-operation from the California Department of Motor Vehicles, along with the location and final odometer reading of the vehicle;

(D) Proof of destruction of the replaced vehicle such as a copy of the Report of Vehicle to be Dismantled from the California Department of Motor Vehicles, for replaced vehicles not otherwise sold, transferred or certified as non-operational;

(E) Written certification or signed declaration from the credit generator that any vehicle that is not sold, scrapped, or otherwise transferred to a new owner or location outside the district has not been, and will not be operated within the district or in Ventura or Santa Barbara Counties during the credit generation period; and

(F) Vehicle identification numbers and engine serial numbers of each replacement vehicle.

(3) If the initial service date, as specified in subparagraph (e)(1)(D) is after the Application is approved, the credit generator shall provide information specified under subparagraph (e)(2)(A) through (e)(2)(F) prior to credit issuance pursuant to paragraph (h)(1).

(4) The Application shall be deemed a plan, and plan fees shall be assessed in accordance with Rule 309 – Fees For Regulation XVI.

(5) The Executive Officer shall approve or disapprove the Application, and any subsequent revisions submitted pursuant to paragraph (e)(6), in writing within 90 days of submittal of a complete Application or Application revision.

(6) Notwithstanding subparagraph (e)(7), any person that submits an Application may amend the Application to:

(A) revise information provided under subparagraphs (e)(1)(A) through (e)(1)(G) at any time;

(B) revise the original projected activity levels specified in subparagraph (e)(1)(I) no later than 30 days for the initial credit generation period and 180 days for the annual credit generation period after the beginning eligibility credit issuance date pursuant to subparagraph (h)(2)(B) of the MSERCs; or

(C) remove a vehicle from the Application, provided the credit generator retires MSERCs or MSERCs converted into RTCs to cover reductions projected for that vehicle for the entire current and subsequent credit generation periods in which the replaced vehicle would have generated credits.

(7) An Application shall not be amended to add a vehicle that is removed from the Application pursuant to subparagraph (e)(6)(C) until the following annual credit generation period.

(8) The credit generation period shall begin no earlier then the date the Application is received by the district.

(f) MSERC Quantification

(1) MSERCs for captive vehicles using fuel consumption or miles traveled as unit of measurement of the activity level shall be quantified using the following equation:

$$MSERC = [(EFbase - EFopt) \times DFA \times CF \times AL]/454$$

Where

MSERC	=	Mobile source emission reduction credit (pounds)
DFA	=	Dual-fuel adjustment equal to 0.7 for the purchase and operation of dual-fueled heavy-duty Class 7 or 8 vehicles, unless otherwise demonstrated through manufacturer's data or testing and approved by the Executive Officer, CARB, and EPA, and equal to 1.0 in all other cases
EFbase	=	Baseline emission factor (g/bhp-hr)
EFopt	=	Optional emission factor (g/bhp-hr)
CF	=	Conversion factor associated with the fuel used to transform EFbase and EFopt into appropriate units consistent with the activity level monitored (bhp-hr/mile, bhp-hr/gal, or bhp-hr/ft^3)
AL	=	Activity level (mile, gal, or ft^3)

(2) MSERCs for captive vehicles using hours of operation as the unit of measurement for the activity level shall be quantified using the following equation:

$$MSERC = \frac{[(EFbase \times HPbase \times LFbase) - (EFopt \times HPopt \times LFopt)] \times AL}{454}$$

Where

MSERC	=	Mobile source emission reduction credit (pounds)
EFbase	=	Baseline emission factor (g/bhp-hr)
EFopt	=	Optional emission factor (g/bhp-hr)
HPbase	=	Horsepower of the replaced engine (hp)
HPopt	=	Horsepower of the replacement engine (hp)
LFbase	=	Load factor of the replaced vehicle
LFopt	=	Load factor of the replacement vehicle
AL	=	Activity level (hour)

(3) The load factors used for the replaced and replacement vehicles shall be equal to 0.43 unless otherwise

demonstrated and approved in writing by the Executive Officer, CARB, and EPA.

(4) The projected and actual activity level used to quantify the MSERCs shall be determined from the information submitted pursuant to subdivisions (e) and (j), respectively. MSERCs shall be quantified using fuel consumption as the activity level for purposes of issuing credits for all vehicles.

(5) To quantify MSERCs, the credit generator shall use the values of baseline and maximum optional emission factors in Table 1 – Evaluation Year and Baseline and Optional Emission Factors based on the date of vehicle delivery.

(6) For yard hostlers the baseline emission factor shall represent the value certified to the on-road emission standards. The baseline emission factor for off-road emission standards as shown in Table 1 may be used provided the credit generator:

(A) provides historic captive vehicle records that demonstrate their existing yard hostlers are powered by off-road engines; and

(B) demonstrates that the replaced yard hostler(s) are powered by engine(s) subject to the off-road emission standards.

(7) Notwithstanding paragraph (f)(5), a credit generator may use a lower optional emission factor provided that the new engine is certified to a CARB NO_X optional credit standard that is lower than the maximum optional emission factor for the applicable category shown in Table 1 and EPA concurs with the CARB certification.

(8) The conversion factors listed in Table 2 - Conversion Factors shall be used to quantify MSERCs based on the appropriate activity level monitored during the credit generation period.

(g) Source Category Evaluation

(1) Six months prior to the end of the evaluation year, the Executive Officer with CARB and EPA shall complete an evaluation on Class 7 and 8 vehicles and yard hostlers and agree whether future MSERCs need to be either discontinued or discounted to ensure credits remain surplus.

(2) The evaluation shall include, but is not limited to, an assessment of current and future local, state, and federal rules and regulations affecting each source category.

(3) After the initial evaluation year, the evaluation performed in paragraph (g)(1) shall be completed on a timeframe as agreed to by the AQMD, CARB, and EPA, but not more than once per year.

(4) Subsequent evaluations performed pursuant to paragraph (g)(3) shall be completed at least six months prior to end of each evaluation period specified in paragraph (g)(3), for the remainder of the pilot program.

(5) No future MSERCs shall be issued if the evaluation is not completed or the AQMD, CARB and EPA do not agree on whether future MSERCs need to be discontinued or the amount that the MSERCs need to be discounted.

(h) Credit Issuance

(1) The Executive Officer shall issue MSERCs provided the credit generator has written approval of the Application and has provided the information specified in subparagraphs (e)(2)(A) through (e)(2)(F):

(2) The Executive Officer shall issue MSERCs:

(A) in pounds of NO_X for the amount indicated in the approved Application in one-year

increments;

(B) designated with a beginning and ending date based on the date of credit issuance;

(C) for the number of annual credit issuance periods up to December 31 of the evaluation year shown in Table 1 and shall be based on the annual projected activity level specified in subparagraph (e)(1)(I); and

(D) discounted upon issuance by:

(i) nine percent which will be retired for the benefit of the environment; and

(ii) one percent which will either fund the Rule 518.2 – Federal Alternative Operating Conditions offset program, or if Rule 518.2 funding is not needed, be retired for the benefit of the environment.

(3) Any reductions other than NOx that result from implementation of projects subject to this rule shall be for the benefit of the environment and ineligible for transfer or use.

(4) The actual amount of MSERCs issued shall be based on the approved Application, or any subsequent verification by the Executive Officer.

(5) Notwithstanding Rule 2008 – Mobile Source Credits, MSERCs converted to RTCs shall be issued for either RECLAIM Compliance Cycle 1 or 2 provided that each annual credit generation period coincides with the entire cycle selected. If the initial credit generation period begins prior to the start of a complete RECLAIM Compliance Cycle, that portion of MSERCs converted to RTCs shall be issued for the current or previous cycle provided that this initial credit generation period is fully contained within the cycle selected.

(6) Any MSERCs not used by the specified expiration date shall be retired to benefit the environment and be ineligible for transfer or use.

(i) Loss or Malfunction

(1) If any replacement vehicle identified in the Application is itself replaced due to loss or a malfunction that is not a result of normal use during the current credit generation period, the credit generator shall replace the vehicle with an engine certified to meet or be below the lower of the following:

(A) The maximum optional emission factor used for the originally replacement vehicle; or

(B) The maximum optional emission factor that is currently in effect at the time of replacement due to loss or malfunction as specified in Table 1; and

(2) The credit generator shall be responsible for obtaining credits and surrendering them to the Executive Officer to make up any potential shortfall in credits according to the reconciliation procedures of subdivision (k) as a result of the following:

(A) any vehicle that is stolen, destroyed, or malfunctions after 10 years from the initial credit issuance date;

(B) any vehicle that is not replaced pursuant to paragraph (i)(1); and/or

(C) any reduction in activity level during the replacement of the stolen, destroyed, or malfunctioning vehicle.

(3) Notwithstanding the requirements of paragraph (i)(2), no additional MSERCs shall be issued:

(A) due to the replacement vehicle having a lower optional emission factor than that used for the original vehicle; or

(B) for use of the replacement vehicle beyond 2006 for the current credit generation period, or the last year of the current credit generation period that surplus emission reductions have been issued.

(j) Monitoring, Recordkeeping, and Reporting

(1) For all replacement vehicles identified in the approved Application, credit generators shall monitor and maintain quarterly records of the following activity levels:

(A) Class 7 and 8 Vehicles and Refuse Collection Vehicles

(i) miles traveled per vehicle; and

(ii) gallons or cubic feet of fuel consumed per vehicle

(B) Yard Hostlers

(i) hours of operation as measured by an hour meter; and

(ii) gallons or cubic feet of fuel consumed per vehicle

(2) For each vehicle, credit generators shall maintain quarterly records of:

(A) the location where the vehicle is parked or garaged, when not in service;

(B) the vehicle engine identification number, model, model year, and serial number;

(C) vehicle loss, sale, lease, repower, or engine overhaul;

(D) when a vehicle is replaced due to loss or malfunction, identification of each replaced and replacement vehicle and engine including vehicle and engine model and model year, identification, and serial number;

(E) when a vehicle is sold or leased, identification and location of new owner or lease;

(F) any emission test results completed to verify or certify a participating engine; and

(G) when a vehicle is transferred out of the district for maintenance service, the type of service performed, the date the vehicle leaves and returns to the district, the odometer reading before leaving and upon returning to the district, and a signed declaration that the vehicle did not haul or transport freight upon leaving and returning to the district.

(3) Within 30 days after the end of each twelve-month credit generation period, the credit generator shall submit:

(A) the activity level specified in paragraph (j)(1) for the previous twelve-month credit generation period; and

(B) the information specified in paragraph (j)(2) if any vehicle identified in the Application is replaced, lost, sold, leased, repowered, transferred across district boundaries for maintenance purposes, or the engine is overhauled.

(C) the operation status of any vehicle which has been certified as being non-operational pursuant to subparagraph (e)(2)(C) along with the vehicles' odometer reading.

(4) Notwithstanding paragraph (j)(3), if the initial credit generation period begins prior to the start of a complete RECLAIM Compliance Cycle as specified in subparagraph (e)(1)(H) and is three months or less, the credit generator shall submit the information specified in paragraph (j)(3) within 30 days after the end of the annual credit generation period following the initial credit generation period. For an initial credit generation period that is greater than three months, the credit generator shall submit the information specified in paragraph (j)(3) within 30 days after the end of the initial credit generation period.

(5) The credit generator shall provide proof of transfer of ownership within 30 days of transfer of ownership for any vehicles receiving a Certificate of Planned Non-Operation which is sold or transferred to a new owner at some future date during the credit generation period along with a copy of a written notification informing the new owner that the replaced vehicle must not be operated, sold, or otherwise transferred or delivered in the district or in Ventura or Santa Barbara Counties;

(6) If the evaluation performed under subdivision (g) indicates that a portion or all future MSERCs are surplus, and if the credit generator elects to continue generating MSERCs, at least 60 days before the end of the evaluation year shown in Table 1, the credit generator shall submit the projected annual activity level for the following credit generation period, not to exceed five years.

(k) Annual Reconciliation

(1) The actual activity level submitted pursuant to paragraphs (j)(3) and (j)(4) shall be reviewed by the Executive Officer upon submittal to evaluate if any shortfall exists between the actual activity level and the projected activity level submitted pursuant to subparagraphs (e)(1)(I), or (e)(6)(B), and paragraphs (j)(3) and (j)(4).

(2) If a shortfall exists between the actual and projected activity levels, the credit generator and user are subject to the penalty provisions specified under subdivision (m).

(3) If the actual activity level exceeded the projected activity level, then the Executive Officer shall, after performing the evaluation required by paragraph (k)(1), issue additional MSERCs equal to the amount of the increase and pursuant to subdivision (h) for use in the RECLAIM Compliance Cycle that ends no later than six months from the last day of the credit generation period of which the increase in activity level occurred.

(l) Credit Use

MSERCs generated under this rule may be used as RTCs under the provisions of Regulation XX – Regional Clean Air Incentive Market (RECLAIM).

(m) Penalties

(1) If a shortfall exists pursuant to paragraph (k)(1), credits equal to 110 percent of the shortfall shall be obtained and surrendered to the Executive Officer such that the applicant shall retire NO_X MSERCs generated under the same or different Application or RTCs that are approved and designated for use within

the same RECLAIM cycle or if not available, from the next RECLAIM cycle.

(2) Any person submitting an Application who falsifies information in the Application or fails to implement any provision of the Application, shall be subject to the penalties specified in the Health and Safety Code for violation of District rules and shall be grounds for the Executive Officer to take one or more of the following actions:

(A) disapprove the Application and void all previously issued MSERCs, and those already converted to RTCs, that have not yet expired;

(B) designate the applicant to be ineligible to generate MSERCs; or

(C) assess the penalty specified in paragraph (m)(1).

(3) If the shortfall cannot be reconciled through paragraph (m)(1), any person who uses MSERCs or MSERCs converted into RTCs generated under this rule at a RECLAIM facility where there is a shortfall in emission reductions or where previously issued MSERCs, and those already converted to RTCs, that have not yet expired are voided, shall be subject to the provisions specified in Rule 2010 – Administrative Remedies and Sanctions for RECLAIM rule violations. If there are multiple credit holders or users of credits generated under the same Application, each holder or user shall retire MSERCs or RTCs according to their prorated share of credits purchased.

(n) Program Review

(1) On or before March 2002 and biannually thereafter, the Executive Officer shall complete a review and present a report to the Governing Board that includes but not be limited to the following information:

(A) General description of projects participating in the pilot program and the amount of NO_X MSERCs, including the amount converted to RTCs, generated under the pilot program;

(B) The location of the credit generation projects and facilities using RTCs under this pilot program;

(C) The amount of NO_X MSERCs retired to benefit the environment; and

(D) The amount of concurrent non-NO_X emission reductions such as PM and toxic air contaminants, generated under the pilot program that have been retired to benefit the environment.

Table 1

Evaluation Year and NO_X Baseline and Optional Emission Factors

	(Vehicle Delivered prior to 10/01/02) (g/bhp-hr)		**(Vehicle Delivered on or after 10/01/02) (g/bhp-hr)**		
Category	**NO_X Baseline Emission Factor**	**NO_X Maximum Optional Emission Factor**	**NO_X Baseline Emission Factor**	**NO_X Maximum Optional Emission Factor**	**Evaluation Year**

Refuse Collection Vehicles	4.4	2.5	2.0	1.8	2006
Other On-Road Heavy-Duty Vehicles	4.0	2.5	2.0	1.8	2006
Yard Hostlers[1] With Existing On-Road Engines	4.0	2.5	2.0	1.8	2006
Yard Hostlers[2] With Existing Off-Road Engines Below 175 hp[3] 175 hp to 299 hp[3]	6.9 5.8	2.5 2.5	6.9 5.8	1.8 1.8	2006 2006

[1] Engines subject to emission standards contained in Title 13, California Code of Regulations, Sections 1950-1978

[2] Engines subject to emission standards contained in Title 13, California Code of Regulations, Sections 2420-2427 or 40 CFR Part 89

[3] Engines with a horsepower rating of 100 hp to 299 hp delivered on and after January 1, 2003 shall have a NO_x baseline emission factor of 4.6 g/bhp-hr.

Table 2

Conversion Factors

Activity Level Monitored	Conversion Factor
Miles Traveled (Class 7)	2.3 bhp-hr/mile
Miles Traveled (Class 8)	2.6 bhp-hr/mile
Cubic Feet of CNG	0.1342 bhp-hr/ft^3
Gallons of LNG	11.07 bhp-hr/gal

(Adopted May 11, 2001)(Amended October 4, 2002)

RULE 1631. PILOT CREDIT GENERATION PROGRAM FOR MARINE VESSELS

(a) Purpose

The purpose of this rule is to provide opportunities to generate NO_x mobile source emission reduction credits (MSERCs) for use in RECLAIM through the voluntary repowering or engine remanufacturing of diesel-fueled marine vessels.

(b) Applicability

(1) This rule applies to persons who voluntarily elect to generate NO_x MSERCs, which may be used in RECLAIM pursuant to Rule 2008 – Mobile Source Credits through the repowering or engine remanufacturing of diesel-fueled captive marine vessels with engines having emissions that are at or below a specified emission standard.

(2) This rule does not apply to any:

(A) emission reductions produced by monies from any public air quality related funding program including but not limited to Rule 2202, the Carl Moyer Memorial Air Quality Standards Attainment Program, or AB2766 funding;

(B) emission reductions required pursuant to any law, rule, or regulation, or legal instrument such as a legal settlement or consent decree; or

(C) emission reductions from a marine engine included in the Certification, Averaging, Banking, and Trading Provisions specified in 40 CFR Part 94, Subpart D.

(c) Definitions

(1) ACTIVITY LEVEL (AL) means for the purpose of this rule, the number of gallons of fuel consumed per year.

(2) APPLICATION means for the purpose of this rule, the Rule 1631 MSERC Application as specified in subdivision (e).

(3) BASELINE EMISSION FACTOR (EF_{base}) means the emission factor, used to quantify annual emissions from a diesel-fueled marine vessel engine prior to repowering or engine remanufacture as determined pursuant to paragraph (f)(3).

(4) CAPTIVE MARINE VESSEL means a marine vessel that exclusively operates within district waters at all times during the credit generation period, except as allowed pursuant to paragraphs (d)(2) and (d)(3).

(5) CREDIT GENERATION PERIOD means the timeframe that MSERCs are being generated and begins on the date that the requirements of subdivision (d) are met and can extend no longer than June 30, 2005. The first segment of the credit generation period, which may be 12 months or less, is referred to as the "initial credit generation period" and each 12 month segment of the credit generation period thereafter, is referred to as the "annual credit generation period."

(6) CREDIT ISSUANCE PERIOD means the timeframe that MSERCs are issued and begins on the date that the requirements of subdivision (g) are met.

(7) DIESEL FUEL means any fuel that is commonly known as diesel fuel No. 1-D or 2-D, or meets the specifications in ASTM D 975, Standard Specifications for Diesel Fuel Oils.

(8) DISTRICT WATERS means the overwater boundaries extending out 25 nautical miles perpendicular from the northernmost coastal intersection point of Los Angeles County and southernmost coastal intersection point of Orange County.

(9) ENGINE REMANUFACTURE OR REMANUFACTURING means the replacement of all marine engine components from an existing 500 or greater horsepower marine engine, except the original engine block, with new applicable factory certified components including, but not limited to fuel injectors with built-in timing systems, compressors and turbochargers, blowers, intercoolers, pistons, liners, bearings, camshafts, camshaft bearings and shells, dampers, fuel pumps, and oil and fuel filters.

(10) GLOBAL POSITIONING SYSTEM OR GPS means a satellite-based radionavigation receiver capable of providing the time and position of a unit.

(11) MARINE ENGINE means a compression-ignited internal combustion engine used for propulsion on a marine vessel that is greater than or equal to 130 kilowatts (175 horsepower) and having a specific engine displacement less than 30 liters per cylinder.

(12) MARINE VESSEL means for the purpose of this rule, any tug boat, tow boat, push boat, passenger/excursion boat, lighter barge, work boat, supply boat, crew boat, utility boat, passenger ferry, barge, dredge, or commercial fishing boat.

(13) MOBILE SOURCE EMISSION REDUCTION CREDIT (MSERC) means for the purpose of this rule, emission reduction credits that meet the requirements of this rule and are issued as specified in paragraph (g)(2).

(14) NEW MARINE ENGINE means a marine engine that has never before been installed on a marine vessel, or any other mobile or stationary source and where the equitable or legal title to the engine has never been transferred to an ultimate purchaser.

(15) OPTIONAL EMISSION FACTOR (EF_{opt}) means for the purpose of this rule, the emission factor used to quantify annual emissions from a marine vessel after repowering or engine remanufacture as determined under paragraph (f)(4).

(16) RECLAIM FACILITY means any stationary source subject to Regulation XX, pursuant to Rule 2001 – Applicability.

(17) REPOWER OR REPOWERING means the replacement of an existing marine engine with a new marine engine having emissions that meet a specified emission standard.

(18) RETIRE OR RETIRED means that the credit, regardless of the expiration date of the credit, can no longer be transferred or used.

(19) SURPLUS means that emission reductions achieved throughout the duration of the emission reduction activity that are not required or relied upon by any local, state, or federal rule, or regulation, and the federal Clean Air Act; and are not required or relied upon in an attainment demonstration, reasonable further progress demonstration, or emissions inventory thereby ensuring that there is no double counting of emission reductions.

(d) Credit Generator Requirements

(1) Any person that elects to generate MSERCs under this rule shall meet all of the following requirements:

(A) Repower existing diesel-fueled marine vessels with new marine engines or remanufacture existing marine engines, to meet an optional emission factor specified in paragraph (f)(4), prior to January 1, 2004;

(B) Demonstrate that each marine vessel is equipped with GPS or another method that is approved by the District, CARB, and EPA that is capable of monitoring and recording that the marine vessel is operated within the district waters at all times during the credit generation period;

(C) Demonstrate that the purchase contract for acquisition of the new marine engine used for repowering is signed no earlier than October 1, 2000, and that the new marine engine is not installed prior to May 11, 2001 or for new components used in engine remanufacturing signed and installed no earlier than October 4, 2002;

(D) Demonstrate that the marine vessel is a captive marine vessel during the credit generation period, except as provided for in paragraphs (d)(2) and (d)(3);

(E) Submit an Application as specified in subdivision (e);

(F) Demonstrate compliance with the monitoring, recordkeeping, and reporting requirements specified in subdivision (h); and

(G) Perform engine maintenance and service on remanufactured engines according to the original equipment manufacturer's schedule of recommended engine maintenance and service submitted in subparagraph (e)(1)(L).

(2) A marine vessel may travel beyond the boundaries of the district waters no more than twice per calendar year and only for the purpose of maintenance or repair. In order for this provision to apply, the following requirements must be met and documented:

(A) The credit generator documents any travel beyond district waters as specified in paragraph (h)(6) and submits the documentation with the information specified in paragraphs (h)(3) and (h)(4);

(B) The credit generator provides a signed declaration that the marine vessel did not conduct any commercial activities during the travel time outside district waters and submits the declaration with the information specified in paragraphs (h)(3) and (h)(4); and

(C) The activity level attributable to travel beyond the district waters is not included in the data and information submitted to the district as specified in paragraphs (h)(3) and (h)(4).

(3) The requirements of paragraph (d)(2) are effective as of October 4, 2002 for any participating marine vessels repowered or remanufactured on or after May 11, 2001.

(e) Application

(1) Any person that elects to generate MSERCs under this rule shall submit an Application to the District no later than 30 days after repowering the marine vessel or engine remanufacture and before January 1, 2004. The Application shall include the following:

(A) A description of the repower or engine remanufacture project, including, at a minimum, the marine vessel name, marine vessel identification number, marine vessel type, owner, and for both the original and replacement engine, the engine make, engine model, engine model year, engine serial number, horsepower, injection timing, and engine speed;

(B) Identification of the geographic area served by the marine vessel during the credit generation period;

(C) Identification of the location where the participating marine vessel is anchored or docked when not in service;

(D) Documentation showing the date of purchase and installation for the new marine engine or date of remanufacture;

(E) In-use source test data for establishing the baseline emission factor pursuant to paragraph (f)(3), in units of either grams of NO_x per kilowatt-hour (g/kW-hr) or grams of NO_x per brake horsepower-hour (g/bhp-hr) that demonstrates compliance with paragraph (f)(3);

(F) In the case of new marine engines, engine manufacturers emission test data, or in the case of engine remanufacturing, in-use source test data according to the protocols specified in subparagraph (f)(3)(B), for establishing the optional emission factor pursuant to paragraph (f)(4), in units of either g/kW-hr or g/bhp-hr, and all necessary conversion factors for the new marine engine used in the repowering or remanufactured engine that demonstrates compliance with subparagraph (d)(1)(A);

(G) The projected initial service date of the participating captive marine vessel that would represent the beginning of the credit generation period;

(H) Identification of the intended user(s) of the MSERCs, if available.

(I) The historical annual average activity level for the participating captive marine vessel for the previous calendar two-year period;

(J) Designation of the RECLAIM Compliance Cycle for each marine vessel for the initial and each annual credit generation period through the entire credit generation period.

(K) The projected activity level for the initial credit generation period and the projected annual activity level after the initial credit generation period which coincides with either RECLAIM Compliance Cycle 1 or 2, up to June 30, 2005. The projected activity level for any participating marine vessel should not exceed 120% of the most recent two-year historical annual average activity level specified in subparagraph (e)(1)(I).

(L) For engine remanufacturing, a written certification from the original equipment manufacturer (OEM) or its authorized agent that all engine components are new, except for the original engine block, along with the remanufactured engine's serial number and horsepower, and the OEMs schedule of recommended engine maintenance and service.

(2) If the initial service date, as specified in subparagraph (e)(1)(G) of the participating captive marine vessel is before the Application is approved, the Application shall include the following additional information:

(A) Proof of delivery of the new replacement marine engine or engine remanufacture components;

(B) For repowered marine vessels, proof that the original marine engine is destroyed, sold, or otherwise transferred to a new owner who operates the engine outside of the district with the location and identity of the new owner along with a copy of a written notification informing the new owner that the original marine engine must not be installed in a marine vessel or other mobile or stationary source which is operated in the state of California; and

(C) For repowered marine vessels, written certification or signed declaration from the credit generator that any original marine engine that is not sold, scrapped, or otherwise transferred to a new owner or location outside the district has not been and will not be installed in a marine vessel or other mobile or stationary source which is operated in the state of California.

(3) If the initial service date, as specified in subparagraph (e)(1)(G) is after the Application is approved, the credit generator shall provide information specified under paragraph (e)(2) prior to credit issuance pursuant to paragraph (g)(1).

(4) The Application shall be deemed a plan, and plan fees shall be assessed in accordance with Rule 309 – Fees for Regulation XVI.

(5) The Executive Officer shall approve or disapprove the Application and any subsequent revisions submitted pursuant to paragraph (e)(6), in writing within 90 days of submittal of a complete Application or Application revision.

(6) Notwithstanding subparagraph (e)(7), any person that submits an Application may amend the Application to:

(A) revise information provided under subparagraphs (e)(1)(A) through (e)(1)(I) at any time;

(B) revise the original projected activity levels specified in subparagraph (e)(1)(K) no later than 30 days for the initial credit generation period and 180 days for the annual credit generation period after the beginning eligibility credit issuance date pursuant to subparagraph (g)(2)(B) of the MSERCs; or

(C) remove a marine vessel from the Application, provided the credit generator retires MSERCs or MSERCs converted into RTCs to cover reductions projected for that marine vessel for the entire current and subsequent credit generation periods in which the replaced vessel would have generated credits.

(7) An Application shall not be amended to add a marine vessel that is removed from the Application pursuant to subparagraph (e)(6)(C) until the following annual credit generation period.

(f) MSERC Quantification

(1) MSERCs shall be quantified using the following equation:

$$MSERC = \frac{(EF_{base} - EF_{opt}) \times EC_{opt} \times AL}{454}$$

Where

MSERC = Mobile source emission reduction credit (pounds)

EF_{base} = Baseline emission factor (grams of NO_x/bhp-hr or grams of NO_x/kW-hr)

EF_{opt}	=	Optional emission factor (grams of NO_x/bhp-hr or grams of NO_x/kW-hr)
EC_{opt}	=	Energy Consumption Factor at the maximum rated speed for the replacement or remanufactured engine (bhp-hr/gallon or kW-hr/gallon)
AL	=	Activity level (gallon)
454	=	Conversion factor from grams to pounds

(2) The projected and actual activity level used to quantify the MSERCs shall be determined from the information submitted pursuant to subdivisions (e) and (h), respectively.

(3) To quantify MSERCs from the repowering or engine remanufacturing of marine vessels the value of the baseline emission factor shall be:

(A) determined using an emission factor in grams of NO_x per brake horsepower-hour or grams of NO_x per kilowatt-hour:

(B) based on emissions testing using either ISO 8178-E3 or CARB-approved in-situ source testing referenced in Diesel Marine Vessel Emissions Testing Protocol, Santa Barbara County Air Pollution Control District, July 1999. If the Santa Barbara protocol is used, the appropriate manufacturer propeller curves shall be used to reflect any changes to the propeller or transmission of the participating marine vessel;

(C) less than or equal to 19.8 grams of NO_x per brake horsepower-hour (26.6 grams of NO_x per kilowatt-hour); and

(D) determined by emission testing with the engine injection timing set to the original equipment manufacturer's recommended specifications if available and currently applicable to the marine engine, otherwise the injection timing shall be set according to normal operating parameters.

(4) To quantify MSERCs from the repowering or engine remanufacturing of marine vessels the value of the optional emission factor shall be:

(A) based on engine manufacturer's test data for new marine engines using certification test protocols referenced in 40 CFR Part 94 – Control of Emissions of Air Pollution from New Marine Compression-Ignition Engines at or Above 37 kW;

(B) for engine remanufacturing, equal to the applicable emission standards specified in Table 1 – Thresholds for NO_x Optional Emission Factors and verified by emission testing according to the protocols specified in subparagraph (f)(3)(B) to be less than or equal to the applicable emission standards specified in Table 1;

(C) determined using an emission factor in grams of NO_x per brake horsepower-hour or grams of NO_x per kilowatt-hour;

(D) for new marine engines, less than or equal to the applicable emission standards specified in Table 1 Thresholds for NO_x Optional Emission Factors; and.

(E) determined using the same emission related engine parameters as used in normal operation for the new or remanufactured engine which may have an effect on engine emissions including, but not limited to injection timing, injection pressure, and any other verifiable parameter deemed necessary by the District.

(g) Credit Issuance

(1) The Executive Officer shall issue MSERCs provided the credit generator has written approval of the Application and has provided the information specified in subparagraph (e)(2)(A) through (e)(2)(C);

(2) The Executive Officer shall issue MSERCs:

(A) in pounds of NO_x for the amount indicated in the approved Application in one-year increments:

(B) designated with a beginning and ending date based on the date of credit issuance;

(C) for the number of credit issuance periods up to June 30, 2005, and shall be based on the annual projected activity level specified in subparagraph (e)(1)(K); and

(D) discounted upon issuance by ten percent which will be retired for the benefit of the environment.

(3) Any reductions other than NO_x that result from implementation of projects subject to this rule shall be for the benefit of the environment and ineligible for transfer or use.

(4) The actual amount of MSERCs issued shall be based on the approved Application or any subsequent verification by the Executive Officer.

(5) Notwithstanding Rule 2008 – Mobile Source Credits, MSERCs converted to RTCs shall be issued for either RECLAIM Compliance Cycle 1 or 2 provided that each annual credit generation period coincides with the entire cycle selected. If the initial credit generation period begins prior to the start of a complete RECLAIM Compliance Cycle, that portion of MSERCs converted to RTCs shall be issued for the current or previous cycle provided that this initial credit generation period completely coincides with the cycle selected.

(6) Any MSERCs not used by the specified expiration date shall be retired to benefit the environment and be ineligible for transfer or use.

(h) Monitoring, Recordkeeping, and Reporting

(1) For all participating marine vessels identified in the approved Application, the credit generator shall monitor and maintain quarterly records of the gallons of fuel consumed per captive marine vessel.

(2) For each captive marine vessel, the credit generator shall maintain quarterly records of:

(A) the location where the participating marine vessel is anchored or docked, when not in service;

(B) marine vessel identification number, engine make, engine model, engine model year, and engine serial number;

(C) marine vessel loss, sale, lease, repower, engine overhaul, and in the case of remanufactured engines, any engine maintenance or service performed according to the OEMs schedule of recommended engine maintenance and service;

(D) when a marine vessel is replaced due to loss or malfunction, identification of replaced marine vessel and engine and replacement engine make, engine model, engine model year, and engine serial number;

(E) when a marine vessel is sold or leased, identification and location of new owner or lessee; and

(F) any emission test results completed to verify or certify a participating engine.

(3) Within 30 days after the end of each twelve-month credit generation period, the credit generator shall submit:

(A) the activity level specified in paragraph (h)(1) for the previous twelve-month credit generation period; and

(B) the information specified in subparagraphs (h)(2)(A) through (h)(2)(F) if any marine vessel identified in the Application is lost or malfunctions.

(4) Notwithstanding paragraph (h)(3), if the initial credit generation period begins prior to the start of a complete RECLAIM Compliance Cycle and is three months or less, the credit generator shall submit the information specified in paragraph (h)(3) within 30 days after the end of the annual credit generation period following the initial credit generation period. For an initial credit generation period that is greater than three months, the credit generator shall submit the information specified in paragraph (h)(3) within 30 days after the end of the initial credit generation period.

(5) Record and maintain data collected through a GPS or another method as approved by the District, CARB and EPA to demonstrate that the marine vessel is a captive marine vessel throughout the credit generation period.

(6) When a marine vessel travels outside district waters during the credit generation period for the purpose of maintenance or repair, the credit generator shall:

(A) Record the date the vessel leaves and returns to district waters;

(B) Record the port of call or destination where the maintenance or repair was performed;

(C) Keep an invoice or receipt documenting date(s) and type of maintenance or repair performed; and

(D) Submit the information specified in this paragraph with the information specified in paragraphs (h)(3) and (h)(4).

(7) The District or a district approved contractor will conduct one source test not more than eighteen months from the beginning date of the initial credit generation period and a second source test on or before June 30, 2005 on each participating marine vessel using a remanufactured engine. Such source tests shall be conducted using the protocols and originally tested emission-related engine parameters specified in paragraph (f)(4).

(8) The District may conduct an unannounced inspection of the originally tested emission-related engine parameters specified in subparagraph (f)(4)(E) periodically throughout the credit generation period.

(i) Annual Reconciliation

(1) The actual activity level submitted pursuant to paragraphs (h)(3) and (h)(4) shall be reviewed upon submittal to evaluate if any shortfall exists between the actual activity level and the projected activity level submitted.

(2) If a shortfall exists between the actual and projected activity levels, the credit generator and user are subject to the penalty provisions specified under subdivision (k).

(3) If the actual activity level exceeded the projected activity level, then the Executive Officer shall after performing the evaluation required by paragraph (i)(1) issue additional MSERCs equal to the amount of the increase and pursuant to subdivision (g) for use in the current RECLAIM Compliance Cycle that ends no later than six months from the last day of the credit generation period of which the increase in activity level occurred.

(j) Credit Use

MSERCs generated under this rule may be used as RTCs under the provisions of Regulation XX – Regional Clean Air Incentive Market (RECLAIM).

(k) Penalties

(1) If a shortfall exists pursuant to paragraph (i)(1), credits equal to 110 percent of the shortfall shall be obtained and surrendered to the Executive Officer such that the applicant shall retire NO_x MSERCs generated under the same or different Application or RTCs that are approved and designated for use within the same RECLAIM cycle or if not available, from the next RECLAIM cycle.

(2) Any person submitting an Application who falsifies information in the Application or fails to implement any provision of the Application, shall be subject to the penalties specified in the Health and Safety Code for violation of District rules and in addition shall be grounds for the Executive Officer to take one or more of the following actions:

(A) disapprove the Application and void all previously issued MSERCs, and those already converted to RTCs, that have not yet expired;

(B) designate the applicant to be ineligible to generate MSERCs; or

(C) assess the penalty specified in paragraph (k)(1).

(3) If the shortfall cannot be reconciled through paragraph (k)(1), any person who uses MSERCs or MSERCs converted into RTCs generated under this rule at a RECLAIM facility where there is a shortfall in emission reductions or where previously issued MSERCs, and those already converted to RTCs, that have not yet expired are voided, shall be subject to the provisions specified in Rule 2010 – Administrative Remedies and Sanctions for RECLAIM rule violations. If there are multiple credit holders or users of credits generated under the same Application, each holder or user shall retire MSERCs or RTCs according to their prorated share of credits purchased.

(4) If a participating marine vessel travels outside the district waters during the credit generation period, except as allowed pursuant to paragraphs (d)(2) and (d)(3), then MSERCs or MSERCs converted into RTCs shall be voided to cover reductions projected for that marine vessel for the entire current credit generation period.

(l) Program Review

(1) On or before April 2003 and April 2005, the Executive Officer shall complete a review and present a report to the Governing Board that includes but not be limited to the following information:

(A) General description of projects participating in the pilot program and the amount of NO_x MSERCs, including the amount converted to RTCs, generated under the pilot program;

(B) The location of the credit generation projects and facilities using RTCs under this pilot program;

(C) The amount of NO_x MSERCs retired to benefit the environment; and

(D) The amount of concurrent non-NO_x emission reductions such as PM and toxic air contaminants, generated under the pilot program that have been retired to benefit the environment.

(2) The Governing Board may suspend approval of pending Applications and receipt of additional Applications through a noticed public hearing.

Table 1
Thresholds for NO_x Optional Emission Factors

Engine Speed, n (rpm)	**NO_x[1] (g/kW-hr)**	**NO_x[1] (g/bhp-hr)**
< 130	17	12.7
130 < n < 2000	$45 * n^{-0.2}$	$33.6 * n^{-0.2}$
≥ 2000	9.8	7.3

1. Emission Standards in Table 1 represent the NO_x emission limits referenced in MARPOL Annex VI.

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

(Adopted May 11, 2001)

RULE 1632. PILOT CREDIT GENERATION PROGRAM FOR HOTELLING OPERATIONS

(a) Purpose

The purpose of this rule is to provide opportunities to generate oxides of nitrogen (NO_x) mobile source emission reduction credits (MSERCs) for use in RECLAIM through the voluntary use of electric power during hotelling operations.

(b) Applicability

(1) This rule applies to persons who voluntarily elect to generate NO_x MSERCs, which may be used in RECLAIM pursuant to Rule 2008 – Mobile Source Credits, through the use of a fuel cell technology in lieu of diesel-fueled auxiliary engines to provide electricity for marine vessel hotelling operations.

(2) This rule does not apply to any:

(A) Emission reductions produced by monies from any public air quality related funding program including but not limited to Rule 2202, the Carl Moyer Memorial Air Quality Standards Attainment Program, or AB2766 funding; or

(B) Emission reductions required pursuant to any law, rule, or regulation, or legal instrument such as a legal settlement or consent decree.

(c) Definitions

(1) ACTIVITY LEVEL (AL) means for the purpose of this rule, the power in kilowatt hours, excluding all other power used for non-hotelling operations, delivered to each marine vessel for hotelling operations per quarter for retrospective credit issuance and per year for prospective credit issuance.

(2) APPLICATION means for the purpose of this rule, the Rule 1632 MSERC Application as specified in subdivision (e).

(3) AUXILIARY ENGINE means for the purpose of this rule, the marine diesel-fueled internal combustion engine onboard a marine vessel that is not used for propulsion of the marine vessel.

(4) BASELINE EMISSION FACTOR (EFbase) means for the purpose of this rule, the emission factor used to quantify annual emissions from auxiliary diesel-fueled engines of the marine vessel that would be emitted if the fuel cell technology was not used during hotelling operations.

(5) CREDIT GENERATION PERIOD means for the purpose of this rule, the timeframe that MSERCs are being generated and begins on the date that the requirements of subdivision (d) are met and ends when the evaluation performed under subdivision (g) indicates that the credits generated under this rule are no longer surplus. The first segment of the credit generation period, which may be 3 months or less, is referred to as the "initial credit generation period" and each 3-month segment thereafter that begins on a calendar quarter is referred to as the "quarterly credit generation period." The "first two-year annual credit generation periods" is the first eight full quarterly credit generation periods.

(6) CREDIT ISSUANCE PERIOD means the timeframe for which MSERCs

are issued and begins on the date that the requirements of subdivision (h) are met.

(7) DIESEL FUEL means any fuel that meets the specifications in ASTM D2069, Standard Specification for Marine Fuels, or is graded as DMX, DMA, DMD, DMC, IFO 180 (including RME-25 or RMF-25), IFO 380 (including RMG-25 and RMH-25), and RMA-RML (including RMG-35 and RMH-35 and RML-55).

(8) DISTRICT means the geographical area defined by Rule 103 – Definition of Geographical Area.

(9) DISTRICT WATERS means the overwater boundaries extending out 25 miles perpendicular from the northernmost coastal intersection point of Los Angeles County and southernmost coastal intersection point of Orange County.

(10) EVALUATION YEAR means for the purpose of this rule, 2010 which represents the initial evaluation year and subsequent years thereafter as determined pursuant to paragraph (g)(3) during which the District, CARB, and EPA will assess whether MSERCs may continue to be generated or if a portion or all future MSERCs need to be discontinued or discounted to ensure credits remain surplus.

(11) FUEL CELL TECHNOLOGY means a technology to generate electricity by combining positive hydrogen ions or negative hydrogen electrons, drawn from a hydrogen-containing fuel, with oxygen atoms.

(12) FUEL CELL SUBSTATION means a platform on district water or on land within the district boundaries that has one or more fuel cells capable of producing electrical power in alternating or direct current at different frequencies for hotelling operations.

(13) FUEL CELL SUBSTATION OPERATOR means the operator of the fuel cell substation that has the rights through agreement or contract to provide electric energy from the substation to a marine vessel for hotelling operations.

(14) GLOBAL POSITIONING SYSTEM OR GPS means a satellite-based radio navigation receiver capable of providing the time, the date, and position of a unit.

(15) HOTELLING OPERATION OR HOTELLING means those operations on a marine vessel that require electric energy to power operations that include, but are not limited to, lights, ventilation, heating, cooling, and loading and unloading operation that are used when a marine vessel is either at anchorage within the district waters or docked or anchored in a harbor or a port that is located within the district.

(16) MARINE VESSEL means for the purpose of this rule cargo ships including auto carrier, bulk carrier, container, reefer, roll-on/roll-off, and general cargo, passenger ships, and tanker ships having propulsion engines with a specific engine displacement of equal to or greater than 30 liters per cylinder.

(17) MOBILE SOURCE EMISSION REDUCTION CREDIT (MSERC) means for the purpose of this rule, emission reduction credits that meet the requirements of this rule and are issued as specified in subdivision (h).

(18) PROSPECTIVE CREDIT ISSUANCE OR PROSPECTIVELY means that MSERCs will be issued annually prior to generating credits.

(19) QUARTER OR QUARTERLY is any three-month period from January 1 to March 31, April 1 to June 30, July 1 to September 30, or October 1 to

December 31, inclusive.

(20) RECLAIM FACILITY means any stationary source subject to Regulation XX, pursuant to Rule 2001 - Applicability.

(21) RETROSPECTIVE CREDIT ISSUANCE OR RETROSPECTIVELY means that MSERCs will be issued quarterly following submittal of the actual activity level specified in paragraph (i)(1) and the quarterly validation has been completed pursuant to subdivision (k).

(22) SURPLUS means that emission reductions achieved throughout the duration of the emission reduction activity that are not required or relied upon by any local, state, or federal rule, or regulation, and the federal Clean Air Act; and are not required or relied upon in an attainment demonstration, reasonable further progress demonstration, or emissions inventory thereby ensuring that there is no double counting of emission reductions.

(d) Credit Generator Requirements

Any person who elects to generate MSERCs under this rule shall meet all of the following requirements:

(1) Use a fuel cell substation in lieu of auxiliary engines to provide electric energy to a marine vessel for hotelling operations;

(2) Demonstrate that the fuel cell substation is equipped with a non-resettable data recorder capable of measuring and recording the electric power in kilowatt hours (kW-hr) delivered to each marine vessel during hotelling operations;

(3) Demonstrate that the fuel cell substation and marine vessel are equipped with GPS that is capable of monitoring and recording that the marine vessel is located adjacent to the fuel cell substation during periods when the fuel cell substation is supplying electric power to the marine vessel for hotelling operations or alternatively use a method as approved by the District, ARB, and EPA that will demonstrate that the fuel cell substation supplied electric power to the marine vessel for hotelling operations;

(4) Demonstrate that the purchase contract for acquisition of fuel cells and any other components associated with the fuel cell substation is signed no earlier than March 1, 2001 and installed no later than January 1, 2005;

(5) Demonstrate that the fuel cell substation operator has an agreement or contract to provide electric energy from the fuel cell substation to a marine vessel during hotelling operations;

(6) Demonstrate that the fuel cell substation is located within the district waters or district boundaries when on land;

(7) Submit an Application as specified in subdivision (e); and

(8) Demonstrate compliance with the monitoring, recordkeeping, and reporting requirements specified in subdivision (i).

(e) Application

(1) Any person who elects to generate MSERCs under this rule shall submit an Application to the District no later than 30 days after receiving a certificate of inspection from the Coast Guard for the fuel cell substation and before January 1, 2004. The Application shall include the following:

(A) A description of the fuel cell substation information, including, at a minimum, location of fuel cell substation when not in service, type of fuel cell, fuel cell manufacturer name, rated power capacity in kilowatt (kW), and fuel cell identification number if available;

(B) The projected initial service date when the fuel cell substation will be used for hotelling operations for a marine vessel that would

represent the beginning of the credit generation period; and

(C) Identification of the intended user(s) of the MSERCs, if available;

(2) If the initial service date, as specified in subparagraph (e)(1)(B), of the fuel cell is before the Application is approved, the Application shall include the following additional information:

(A) Proof of purchase and acquisition of the fuel cell substation;

(B) A written certification that the operator of the fuel cell has a lease or ownership of a terminal for docking, refueling, and service of the fuel cell substation at the harbor for which the service is provided; and

(C) Proof that the fuel cell substation operator has a written agreement from a marine vessel operator stating a willingness to use electric energy from the fuel cell substation to the marine vessel during hotelling operations.

(3) If the initial service date, as specified in subparagraph (e)(1)(B), of the fuel cell substation is after the Application is approved, the credit generator shall provide information specified under subparagraph (e)(2)(A) through (e)(2)(C) prior to credit issuance pursuant to paragraph (h)(1).

(4) The Application shall be deemed a plan, and plan fees shall be assessed in accordance with Rule 309 – Fees For Regulation XVI.

(5) The Executive Officer shall approve or disapprove the Application, and any subsequent revisions submitted pursuant to paragraph (e)(6), in writing within 90 days of submittal of a complete Application or Application revision.

(6) Any person that submits an Application may amend the Application to:

(A) revise information provided under subparagraphs (e)(1)(A) through (e)(1)(C) at any time;

(B) include information required under subparagraphs (h)(4)(A) and (h)(4)(B) if the credit generator elects to have MSERCs issued prospectively; or

(C) revise the activity levels specified in subparagraph (h)(4)(B) no later than 180 days after the beginning eligibility credit issuance date pursuant to subparagraph (h)(2)(C).

(7) The credit generation period shall begin no earlier then the date the Application is received by the district.

(f) MSERC Quantification

(1) MSERCs that are created from marine vessels using power generated by a fuel cell substation during hotelling operation shall be quantified using the following equation:

MSERC =

Where:

MSERC = Mobile source emission reduction credit (pounds of NO_x)

EFbase = Baseline emission factor (gram/kW-hr)

EFopt = Optional emission factor of fuel cell (gram/kW-hr)

AL = Activity level (kW-hr)

454 = Conversion factor from grams to pounds

(2) For auxiliary engines with a model year that is earlier than the applicable model year specified in Table 1, the NO_x baseline emission factor used for hotelling operations shall be based on EPA's Final Regulatory Impact Analysis: Control of Emissions from Marine Diesel Engines – November 1999 and shall be:

(A) 10 gram/kW-hr, for engines with a maximum rated capacity of less than 1000 kW; or

(B) 13 gram/kW-hr, for engines with a maximum rated capacity of greater than or equal 1000 kW.

(3) Notwithstanding paragraph (f)(2), for those auxiliary engine(s) on a marine vessel operated under a United States flag the NO_x baseline emission factor shall be the NO_x emission standard for marine engine(s) specified in Table 1 - NO_x Emission Standards for Engines with a Post-2004 Model Year:

(A) for the applicable auxiliary engine size with a model year on or after the model year specified in Table 1; or

(B) for the applicable auxiliary engine size for any engine model(s) that an engine manufacturer has included in the Certification, Averaging, Banking, and Trading Provisions specified in 40 CFR Part 94, Subpart D.

(4) For marine vessels that use a combination of different size auxiliary engines for hotelling operations, a weighted average NO_x baseline emission factor shall be used. A weighted average emission factor should be estimated using:

$$EFbase = \sum_{i=1}^{n} (kW_i / (kW_t) \times EF_i$$

Where

kW_i = The maximum rated capacity of each auxiliary engine

kW_t = The sum of all the auxiliary engines maximum rated capacity

EF_i = The baseline emission factor for each engine as specified in paragraphs (f)(2) or (f)(3)

(5) The NO_x optional emission factor for the fuel cell shall be equal to zero unless otherwise specified through further evaluation by the Executive Officer, CARB, and EPA.

(6) The actual activity level used to quantify the MSERCs shall be based on the information submitted pursuant to subdivision (i) and either the quarterly validation if credits are issued retrospectively or twelve-month reconciliation if credits are issued prospectively pursuant to subdivision (k).

(g) Source Category Evaluation

(1) On or before July 1, 2010, the Executive Officer with CARB and EPA shall complete an evaluation on marine vessels hotelling operations and agree whether future MSERCs need to be either discontinued or further discounted to ensure credits remain surplus.

(2) The evaluation shall include, but is not limited to, an assessment of current and future local, state, and federal rules and regulations affecting each source category.

(3) After the initial evaluation year, the evaluation performed in paragraph (g)(1) shall be completed on a timeframe as agreed to by the District, CARB,

and EPA, but not more than once per year.

(4) Subsequent evaluations performed pursuant to paragraph (g)(3) shall be completed at least six months prior to end of each evaluation period specified in paragraph (g)(3), for the remainder of the pilot program.

(5) No future MSERCs shall be issued if the evaluation is not completed or the District, CARB and EPA do not agree on whether future MSERCs need to be discontinued or the amount that the MSERCs need to be discounted.

(h) Credit Issuance

(1) The Executive Officer shall issue MSERCs provided:

(A) the Application has been approved by the Executive Officer;

(B) the credit generator has submitted the information specified in subparagraphs (e)(2)(A) through (e)(2)(C);

(C) the credit generator has submitted records and reports pursuant to subdivision(i); and

(D) the Executive Officer has completed the quarterly validation of the activity level pursuant to subdivision (k) if the MSERCs are issued retrospectively pursuant to paragraph (h)(3).

(2) The Executive Officer shall issue MSERCs:

(A) to the fuel cell operator that meets the applicability requirements specified under subdivision (b) and requirements pursuant to subdivision (d);

(B) retrospectively through the first two-year annual credit generation periods pursuant to paragraph (h)(3);

(C) either retrospectively for subsequent quarters following the end of the first two-year annual credit generation periods pursuant to paragraph (h)(3) or prospectively for subsequent annual credit generation periods following the end of the first two-year annual credit generation periods pursuant to paragraph (h)(4); and

(D) designated with a beginning and ending date based on the date of credit issuance.

(3) The Executive Officer shall issue MSERCs retrospectively in quarterly increments, in pounds of NO_X:

(A) for each quarter through the end of the first two-year annual credit generation periods;

(B) for subsequent quarterly credit generation periods following the end of the first two-year annual credit generation periods if the credit generator elects to continue retrospective credit issuance and has not submitted a written request to the Executive Officer pursuant to subparagraph (h)(4)(A) to issue MSERCs prospectively;

(C) for any quarterly generation period between the end of the first two-year annual credit generation periods and the next annual credit generation period that coincides with either the RECLAIM Compliance Cycle 1 or 2 as designated by the credit generator pursuant to paragraph (h)(7) if the credit generator elects to have MSERCs issued prospectively; and

(D) after the Executive Officer completes the quarterly validation pursuant to subdivision (k) and within 30 days after the submittal of the actual activity level pursuant to paragraph (i)(4).

(4) The Executive Officer may issue MSERCs prospectively in annual increments, in pounds of NO_X:

(A) following the end of the first two-year annual credit generation periods and each annual credit generation period thereafter for a period not to exceed five years, provided the credit generator submits a written request to amend their application for prospective credit issuance and designation of the RECLAIM Compliance Cycle for each annual credit generation period to the Executive Officer within 30 days after the end of the first two-year annual credit generation periods;

(B) in an amount based on an activity level as specified by the credit generator that is included in an amendment to their application, that shall not exceed 120% of the annual average activity level that was reported and validated through the first two-year annual credit generation periods; and

(C) beginning on either a RECLAIM Cycle 1 or 2, as designated by the credit generator pursuant to subparagraph (h)(4)(A).

(5) The Executive Officer shall discount MSERCs upon issuance by:

(A) 10% which will be retired for the benefit of the environment for MSERCs issued prior to January 1, 2010; and

(B) an additional 10% after January 1, 2010 which will be retired for the benefit of the environment unless through the evaluation performed pursuant to subdivision (g), the District, CARB, and EPA determine that NO_X emission reductions from marine vessel hotelling operations pursuant to this rule are not required or relied upon in the most recently approved SIP.

(6) Only NO_X emission reductions generated pursuant to this rule will be issued as MSERCs.

(7) Notwithstanding Rule 2008 – Mobile Source Credits, for MSERCs issued retrospectively pursuant to paragraph (h)(3), MSERCs converted to RTCs shall be issued for the RECLAIM Compliance Cycle 1 or 2 that the credit generator selects provided the initial or quarterly credit generation period and subsequent quarterly credit generation periods coincide with the entire RECLAIM Compliance cycle plus the reconciliation period of that cycle.

(8) Notwithstanding Rule 2008 – Mobile Source Credits, for MSERCs issued prospectively pursuant to paragraph (h)(4), MSERCs converted to RTCs shall be issued for either RECLAIM Compliance Cycle 1 or 2 provided that each annual credit generation period coincides with the entire cycle selected. If the initial credit generation period begins prior to the start of a complete RECLAIM Compliance Cycle, that portion of MSERCs converted to RTCs shall be issued for the current or previous cycle provided that this initial credit generation period completely coincides with the cycle selected.

(9) Any MSERCs not used by the specified expiration date shall be retired to benefit the environment and be ineligible for transfer or use.

(i) Monitoring, Recordkeeping, and Reporting

(1) For each fuel cell substation, the credit generator shall monitor and maintain quarterly records of the kilowatt-hours used for each marine vessel that uses the fuel cell substation for hotelling for the initial and each subsequent quarterly credit generation periods using a non-resettable data recorder capable of measuring and recording the electric power in kilowatt hours (kW-hr) delivered to each marine vessel during hotelling operations.

(2) For each marine vessel that uses the fuel cell substation for hotelling, the

credit generator shall maintain records per each fuel cell substation for the initial and each subsequent quarterly credit generation period of:

(A) the marine vessel name, owner or ship captain, vessel type, model, model year built, and identification number;

(B) a description of and the number of auxiliary engines, each auxiliary engine's maximum rated capacity (kW) and the ASTM specification of the fuel type; and

(C) the location of the marine vessel, the time and date using a GPS device or the daily log provided by the Marine Exchange.

(3) For each fuel cell substation, the credit generator shall maintain records for the initial and each subsequent quarterly credit generation period of:

(A) the location where the fuel cell substation is docked when not in service;

(B) the manufacturer name, type, rated power capacity (kW), and fuel cell identification number if available; and

(C) the service date and fuel cell start and finish time when the fuel cell substation is used to provide electrical power to a marine vessel for hotelling.

(D) the location of the fuel cell substation, the time and date using a GPS device when in service.

(4) Within 30 days after the end of the initial and each subsequent quarterly credit generation period if credits are issued retrospectively, and within 30 days after the end of each twelve-month credit generation period if credits are issued prospectively, the credit generator shall submit the activity level specified in paragraphs (i)(1) through (i)(3).

(5) Notwithstanding paragraph (i)(4), if the initial credit generation period begins prior to a quarter and is two months or less, the credit generator shall submit the information specified in paragraphs (i)(1) through (i)(3) within 30 days after the end of the first quarterly credit generation period. For an initial credit generation period that is greater than two months, the credit generator shall submit the information specified in paragraphs (i)(1) through (i)(3) within 30 days after the end of the initial credit generation period.

(6) The credit generator shall maintain all data required to be gathered, computed, or reported pursuant to this rule for three years after each quarterly or annual report is submitted to the District.

(j) Credit Use

MSERCs generated under this rule may be used as RTCs under the provisions of Regulation XX – Regional Clean Air Incentive Market (RECLAIM).

(k) Quarterly Validation and Reconciliation

(1) For MSERCs issued retrospectively pursuant to paragraph (h)(3), the reported activity level submitted pursuant to paragraphs (i)(4) and (i)(5) shall be reviewed by the Executive Officer upon submittal to validate the activity level. If the review indicates that the activity level reported is not consistent with records submitted pursuant to paragraphs (i)(1) through (i)(3), the Executive Officer shall appropriately adjust the activity level reported.

(2) The Executive Officer shall validate the activity level reported based on the analysis specified under paragraphs (k)(1) within 30 days after the reported activity level is submitted pursuant to paragraphs (i)(4) and (i)(5) for

MSERCs issued retrospectively pursuant to paragraph (h)(3).

(3) For MSERCs issued prospectively pursuant to paragraph (h)(4), the actual activity level submitted pursuant to paragraph (i)(4) shall be reviewed upon submittal to evaluate if any shortfall exists between the actual activity level and activity level specified by the credit generator pursuant to subparagraph (h)(4)(B).

(4) If a shortfall exists between the actual and projected activity levels, the credit generator and user are subject to the penalty provisions specified under subdivision (l).

(5) If the actual activity level exceeded the activity level specified by the credit generator pursuant to subparagraph (h)(4)(B), then the Executive Officer shall after performing the evaluation required by paragraph (k)(3) issue additional MSERCs equal to the amount of the increase and pursuant to subdivision (h) for use in the current RECLAIM Compliance Cycle that ends no later than six months from the last day of the credit generation period of which the increase in activity level occurred.

(l) Penalties

(1) If a shortfall exists pursuant to paragraph (k)(3), credits equal to 110 percent of the shortfall shall be obtained and surrendered to the Executive Officer such that the applicant shall retire NO_x MSERCs generated under the same or different Application or RTCs that are approved and designated for use within the same RECLAIM cycle or if not available, from the next RECLAIM cycle.

(2) Any person submitting an Application who falsifies information in the Application or fails to implement any provision of the Application, shall be subject to the penalties specified in the Health and Safety Code for violation of District rules and shall be grounds for the Executive Officer to take one or more of the following actions:

(A) disapprove the Application and void all previously issued MSERCs, and those already converted to RTCs, that have not yet expired;

(B) designate the applicant to be ineligible to generate MSERCs; or

(C) assess the penalty specified in paragraph (l)(1).

(3) Any person who uses MSERCs converted into RTCs generated under this rule at a RECLAIM facility where previously issued MSERCs, and those already converted to RTCs, that have not yet expired are voided, shall be subject to the provisions specified in Rule 2010 – Administrative Remedies and Sanctions for RECLAIM rule violations. If there are multiple credit holders or users of credits generated under the same Application, each holder or user shall retire MSERCs or RTCs according to their prorated share of credits purchased.

(m) Program Review

(1) On or before April 2003 and biannually thereafter, up until credits are discontinued according to the source category evaluation performed pursuant to subdivision (g), the Executive Officer shall complete a review and present a report to the Governing Board that includes but not be limited to the following information:

(A) General description of projects participating in the pilot program and the amount of NO_x MSERCs, including the amount converted

to RTCs, generated under the pilot program;

(B) The location of the credit generation projects and facilities using RTCs under this pilot program;

(C) The amount of NO_X MSERCs retired to benefit the environment; and

(D) The amount of concurrent non-NO_X emission reductions such as PM and toxic air contaminants, generated under the pilot program that have been retired to benefit the environment.

(2) The Governing Board may suspend approval of pending Applications and receipt of additional Applications through a noticed public hearing.

Table 1
NO_X Emission Standards for Engines with a Post-2004 Model Year

Starting Date	Displacement (liters/cylinder)	NO_X[1] (g/kW-hr)	NO_X[1] (g/bhp-hr)
Power ≥ 37 kW			
2005	Displacement < 0.9	7.3	5.4
2004	0.9 ≤ Displacement < 2.5	7.0	5.2
2007	2.5 ≤ Displacement < 5.0	7.0	5.2
2007	5.0 ≤ Displacement < 15	7.7	5.7
2007	15 ≤ Displacement < 20	8.6	6.4
Power ≥ 3300 kW			
2007	15 ≤ Displacement < 25	9.6	7.2
2007	25 ≤ Displacement < 30	10.8	8.1

1. Emission Standards in Table 1 represent NO_X portion only of a combined NO_X + THC standard based on 40CFR Part 94.8 – Control of Emissions of Air Pollution from New Marine Compression – Ignition Engines at or Above 37 kW

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

(Adopted May 11, 2001)

RULE 1633.

PILOT CREDIT GENERATION PROGRAM FOR TRUCK/ TRAILER REFRIGERATION UNITS

(a) Purpose

The purpose of this rule is to provide opportunities to generate NO_x mobile source emission reduction credits (MSERCs) for use in RECLAIM through the voluntary electrification of truck/trailer refrigeration units.

(b) Applicability

(1) This rule applies to persons who voluntarily elect to generate NO_x MSERCs, which may be used in RECLAIM pursuant to Rule 2008 - Mobile Source Credits, through the conversion or purchase of truck or trailer refrigeration units that are equipped with electric standby mode that uses electric power instead of a diesel-fueled auxiliary engine to operate the truck or trailer refrigeration unit at a distribution center.

(2) This rule does not apply to any:

(A) emission reductions produced by monies from any public air quality related funding program including but not limited to Rule 2202, the Carl Moyer Memorial Air Quality Standards Attainment Program, or AB2766 funding; or

(B) emission reductions required pursuant to any law, rule, or regulation, or legal instrument such as a legal settlement or consent decree.

(c) Definitions

(1) ACTIVITY LEVEL (AL) means for the purpose of this rule, the number of kilowatt-hours (kW-hr) used by each truck or trailer refrigeration unit while in electric standby mode per quarter for retrospective credit issuance and per year for prospective credit issuance.

(2) APPLICATION means for the purpose of this rule, the Rule 1633 MSERC Application as specified in subdivision (e).

(3) AUXILIARY ENGINE means an off-road engine less than 100 horsepower which is used to power a truck or trailer refrigeration unit.

(4) BASELINE EMISSION FACTOR (EFbase) means for the purpose of this rule, the emission factor used to quantify annual emissions from a diesel-fueled engine used to supply power to a truck or trailer refrigeration unit.

(5) CREDIT GENERATION PERIOD means for the purpose of this rule, the timeframe that MSERCs are being generated and begins on the date that the requirements of subdivision (d) are met. The first segment of the credit generation period, which may be 3 months or less, is referred to as the "initial

credit generation period" and each 3-month segment thereafter that begins on a calendar quarter is referred to as the "quarterly credit generation period." The "first two-year annual credit generation periods" is the first eight full quarterly credit generation periods.

(6) CREDIT ISSUANCE PERIOD means the timeframe that MSERCs are issued and begins on the date that the requirements of subdivision (h) are met.

(7) DIESEL FUEL means any fuel that is commonly known as diesel fuel No. 1-D or 2-D, or meets the specifications in ASTM D 975, Standard Specifications for Diesel Fuel Oils.

(8) DISTRIBUTION CENTER means for the purpose of this rule, a warehouse or goods transportation facility where refrigerated trucks and trailers are loaded, unloaded, or transferred.

(9) DISTRIBUTION CENTER OPERATOR means the operator of the distribution center that has the rights through direct ownership, or an agreement or contract to provide electric energy to operate truck or trailer refrigeration units during electric standby mode.

(10) DISTRICT means the geographical area defined by Rule 103 - Definition of Geographical Area.

(11) ELECTRIC STANDBY MODE means the operation of a truck and trailer refrigeration unit using an electric motor powered by electricity supplied by the distribution center.

(12) EVALUATION YEAR means for the purpose of this rule, 2006 which represents the initial evaluation year and subsequent years thereafter as determined pursuant to paragraph (g)(3) during which the District, CARB, and EPA will assess whether MSERCs may continue to be generated or if a portion or all future MSERCs need to be discontinued or discounted to ensure credits remain surplus.

(13) GLOBAL POSITIONING SYSTEM OR GPS means a satellite-based radionavigation receiver capable of providing the time, date, and position of a unit.

(14) MOBILE SOURCE EMISSION REDUCTION CREDIT (MSERC) means for the purpose of this rule, emission reduction credits that meet the requirements of this rule and are issued as specified in paragraph (h)(2).

(15) OPTIONAL EMISSION FACTOR (EFopt) means for the purpose of this rule, the emission factor used to quantify annual emissions from the use of electric standby mode for a truck or trailer refrigeration unit and is based on an in-Basin power generation emission factor of 0.232 pounds per megawatt-hour.

(16) PROSPECTIVE CREDIT ISSUANCE OR PROSPECTIVELY means that MSERCs will be issued annually prior to generating credits.

(17) QUARTER OR QUARTERLY is any three-month period from January 1 to March 31, April 1 to June 30, July 1 to September 30, or October 1 to December 31, inclusive.

(18) RECLAIM FACILITY means any stationary source subject to Regulation XX, pursuant to Rule 2001 - Applicability.

(19) RETIRE OR RETIRED means that the credit, regardless of the expiration date of the credit, can no longer be transferred or used.

(20) RETROSPECTIVE CREDIT ISSUANCE OR RETROSPECTIVELY means that MSERCs will be issued quarterly following submittal of the actual activity level specified in paragraph (i)(1) and the quarterly validation has been completed pursuant to subdivision (k).

(21) SURPLUS means that emission reductions achieved throughout the duration of the emission reduction activity that are not required or relied upon by any local, state, or federal rule, or regulation, and the federal Clean Air Act; and are not required or relied upon in an attainment demonstration, reasonable further progress demonstration, or emissions inventory thereby ensuring that there is no double counting of emission reductions.

(22) TRUCK OR TRAILER REFRIGERATION UNIT means a refrigeration chiller powered by a diesel-fueled auxiliary engine or electric motor that is mounted on a truck body or a trailer container for the purpose of providing chilled air to the contents of the truck container or trailer. For purposes of this rule, truck or trailer refrigeration units use engines that are separate from the primary engine used for propulsion.

(d) Credit Generator Requirements

Any person that elects to generate MSERCs under this rule shall meet all of the following requirements:

(1) Use of electric power in lieu of auxiliary engines to power a truck or trailer refrigeration unit which is used at a distribution center;

(2) Demonstrate that the conversion or purchase of the truck or trailer refrigeration unit with electric standby mode was initiated no earlier than March 1, 2001;

(3) Demonstrate that the infrastructure which includes a stationary ground power supply and transmission system necessary to provide electric power at the proper frequency and voltage at a distribution center for use by truck or trailer refrigeration units operating in electric standby mode is installed no earlier than March 1, 2001;

(4) Demonstrate that the distribution center operator has the right through direct ownership or an agreement or contract to provide electric energy to operate a truck or trailer refrigeration unit during electric standby mode.

(5) Demonstrate that each truck or trailer refrigeration unit is equipped with data recorders or another method as approved by the District, ARB, and EPA capable of recording the location, date, and time when the electric standby mode is used;

(6) Demonstrate that the distribution center is equipped with a totalizing meter capable of measuring and recording the electric power measured in kilowatt hours (kW-hr) consumed for truck or trailer refrigeration units used during electric standby modes or another method as approved by the District, ARB, and EPA;

(7) Demonstrate that each truck or trailer refrigeration unit is equipped with a GPS

or another method as approved by the District, ARB and EPA that is capable of monitoring and recording truck or trailer refrigeration units located at the distribution center during periods when electric standby mode is used;

(8) Demonstrate that the distribution center is located in the District;

(9) Submit an Application as specified in subdivision (e); and

(10) Demonstrate compliance with the monitoring, recordkeeping, and reporting requirements specified in subdivision (i).

(e) Application

(1) Any person that elects to generate MSERCs under this rule shall submit an Application to the District no later than 30 days after the conversion or purchase of a truck or trailer refrigeration unit and before January 1, 2004. The Application shall include the following:

(A) A description of the distribution center, including at a minimum:

(i) Location of the distribution center, including GPS coordinates;

(ii) a description of the products handled at the facility; and

(iii) Facility plot plan including locations of all truck or trailer loading/unloading and staging areas identifying those which will be used to provide power for electric standby mode.

(B) Proof of purchase for each new truck or trailer refrigeration unit capable of operating in electric standby mode.

(C) The projected initial date that the distribution center operator will provide electric energy to converted or newly purchased truck or trailer refrigeration units that would represent the beginning of the credit generation period; and

(D) Identification of the intended user(s) of the MSERCs, if available.

(2) If the initial conversion or purchase date of a truck or trailer refrigeration unit that is equipped with an electric standby mode, as specified in subparagraph (e)(1)(C), is before the Application is approved, the Application shall include the following additional information:

(A) Proof of purchase and acquisition of each truck or trailer refrigeration unit that is equipped with an electric standby mode; and

(B) Proof that the distribution center operator has an agreement or contract to provide electric energy to operate a truck or trailer refrigeration unit during electric standby mode.

(3) The Application shall be deemed a plan, and plan fees shall be assessed in accordance with Rule 309 - Fees for Regulation XVI.

(4) The Executive Officer shall approve or disapprove the Application and any subsequent revisions submitted to paragraph (e)(5), in writing within 90 days of

submittal of a complete Application or Application revision.

(5) Any person that submits an Application may amend the Application to:

(A) Revise information provided under subparagraphs (e)(1)(A) through (e)(1)(D) at any time;

(B) Include information required under subparagraphs (h)(4)(A) and (h)(4)(B) if the credit generator elects to have MSERCs issued prospectively; or

(C) Revise the activity levels specified in subparagraph (h)(4)(B) no later than 180 days after the beginning eligibility credit issuance date pursuant to subparagraph (h)(2)(C).

(f) MSERC Quantification

(1) MSERCs shall be quantified using the following equation:

MSERC =

Where

MSERC	=	Mobile source emission reduction credit (pounds of NO_x)
EFbase	=	Baseline emission factor (g/kW-hr)
EFopt	=	Optional emission factor (g/kW-hr)
AL	=	Activity level (kW-hr)
454	=	Conversion factor from grams to pounds

(2) The value of the NO_x baseline emission factor shall be based on 92 percent of NO_x + total hydrocarbon (THC) EPA certified emission level pursuant to 40 CFR Part 89.112 and Subparts D and E for each diesel-fueled engine or if no certification exists, the baseline emission factors shall be taken from Table 1 - NO_x Baseline and Optional Emission Factors based on the type of refrigeration unit.

(3) The value of the NO_x optional emission factors shall be taken from Table 1 based on type of refrigeration unit.

(4) The actual activity level used to quantify the MSERCs shall be determined pursuant to subdivision (i) and either the quarterly validation if credits are issued retrospectively or twelve-month reconciliation if credits are issued prospectively pursuant to subdivision (k).

(g) Source Category Evaluation

(1) On or before July 1, 2006, the Executive Officer with CARB and EPA shall complete an evaluation of truck and trailer refrigeration units and agree whether future MSERCs, need to be discontinued or discounted to ensure credits remain surplus.

(2) The evaluation shall include, but is not limited to, an assessment of current and future local, state, and federal rules and regulations affecting truck and trailer refrigeration units.

(3) After the initial evaluation year specified in Table 1, the evaluation performed in paragraph (g)(1) shall be completed on a timeframe as agreed to by the District, CARB, and EPA, but not more than once per year.

(4) Subsequent evaluations performed pursuant to paragraph (g)(3) shall be completed at least six months prior to end of each evaluation period specified in paragraph (g)(3), for the remainder of the pilot program.

(5) No future MSERCs shall be issued if the evaluation is not completed or the District, CARB and EPA do not agree on whether future MSERCs need to be discontinued or the amount that the MSERCs need to be discounted.

(h) Credit Issuance

(1) The Executive Officer shall issue MSERCs provided:

(A) the Application has been approved by the Executive Officer;

(B) the credit generator has submitted the information specified in subparagraphs (e)(2)(A) and (e)(2)(B);

(C) the credit generator has submitted records and reports pursuant to subdivision (i); and

(D) the Executive Officer has completed the quarterly validation of the activity level pursuant to subdivision (k) if the MSERCs are issued retrospectively pursuant to paragraph (h)(3).

(2) The Executive Officer shall issue MSERCs:

(A) to the distribution center operator that meets the applicability requirements pursuant to subdivision (b) and the requirements pursuant to subdivision (d);

(B) Retrospectively through the first two-year annual credit generation periods pursuant to paragraph (h)(3);

(C) either retrospectively for subsequent quarters following the end of the first two-year annual credit generation periods pursuant to paragraph (h)(3) or prospectively for subsequent annual credit generation periods following the end of the first two-year annual credit generation periods pursuant to paragraph (h)(4); and

(D) designated with a beginning and ending date based on the date of credit issuance.

(3) The Executive Officer shall issue MSERCs retrospectively in quarterly increments, in pounds of NO_x:

(A) for each quarter through the end of the first two-year annual credit generation periods;

(B) for subsequent quarterly credit generation periods following the end of the

first two-year annual credit generation periods if the credit generator elects to continue retrospective credit issuance and has not submitted a written request to the Executive Officer pursuant to subparagraph (h)(4)(A) to issue MSERCs prospectively;

(C) for any quarterly generation period between the end of the first two-year annual credit generation periods and the next annual credit generation period that coincides with either the RECLAIM Compliance Cycle 1 or 2 as designated by the credit generator pursuant to paragraph (h)(7) if the credit generator elects to have MSERCs issued prospectively; and

(D) after the Executive Officer completes the quarterly validation pursuant to subdivision (k) and within 30 days after the submittal of the actual activity level pursuant to paragraph (i)(2).

(4) The Executive Officer shall issue MSERCs prospectively in annual increments, in pounds of NO_x:

(A) following the end of the first two-year annual credit generation periods and each annual credit generation period thereafter for a period not to exceed five years, provided the credit generator submits a written request to amend the Application for prospective credit issuance and designation of the RECLAIM Compliance Cycle for each annual credit generation period to the Executive Officer within 30 days after the end of the first two-year annual credit generation periods;

(B) in an amount based on an activity level as specified by the credit generator that is included in an amendment to their Application, that shall not exceed 120% of the annual average activity level that was reported and validated through the first two-year annual credit generation periods; and

(C) beginning on either a RECLAIM Cycle 1 or 2, as designated by the credit generator pursuant to subparagraph (h)(4)(A).

(5) The Executive Officer shall discount MSERCs upon issuance by:

(A) nine percent which will be retired for the benefit of the environment; and

(B) one percent which will either fund the Rule 518.2 - Federal Alternative Operating Conditions offset program, or if Rule 518.2 funding is not needed, be retired for the benefit of the environment.

(6) Notwithstanding paragraph (h)(5), MSERCs generated from the use of electric standby mode for truck refrigeration units shall be further discounted by 30 percent prior to issuance.

(7) Any reductions other than NO_x that result from implementation of projects subject to this rule shall be retired for the benefit of the environment and ineligible for transfer or use.

(8) Notwithstanding Rule 2008 - Mobile Source Credits, for MSERCs issued retrospectively pursuant to paragraph (h)(3), MSERCs converted to RTCs shall be issued for the RECLAIM Compliance Cycle 1 or 2 that the credit generator selects provided the initial or quarterly credit generation period and subsequent quarterly credit generation period coincide with the entire RECLAIM Compliance cycle plus the reconciliation period of that cycle.

(9) Notwithstanding Rule 2008 - Mobile Source Credits, for MSERCs issued prospectively pursuant to paragraph (h)(4), MSERCs converted to RTCs shall be issued for either RECLAIM Compliance Cycle 1 or 2 provided that each annual credit generation period coincides with the entire cycle selected. If the initial credit generation period begins prior to the start of a complete RECLAIM Compliance Cycle, that portion of MSERCs converted to RTCs shall be issued for the current or previous cycle provided that this initial credit generation period completely coincides with the cycle selected.

(10) Any MSERCs not used by the specified expiration date shall be retired to benefit the environment and be ineligible for transfer or use.

(i) Monitoring, Recordkeeping, and Reporting

(1) For each truck and trailer refrigeration unit that uses electric energy from the distribution center, credit generators shall monitor and maintain records for the initial and each subsequent quarterly credit generation periods of the following:

(A) Numbers of kilowatt-hours that each refrigeration unit consumes while in electric standby mode using a non-resettable automatic data recorder or another method as approved by the District, ARB, and EPA;

(B) Cargo carried and loading and unloading times while at the distribution center;

(C) Date stamped record of truck container or trailer door openings using an automatic data recorder or another method as approved by the District, ARB, and EPA; and

(D) Truck and trailer refrigeration unit identification, identification of the existing diesel-fueled engine used to power the refrigeration unit, including engine manufacturer, engine model, engine model year, engine displacement, engine horsepower, EPA certified emission factor; identification of the electric motor used to power the refrigeration unit during electric standby mode, including motor manufacturer, model number, model year, horsepower, and power consumption rate.

(2) Within 30 days after the end of the initial and each subsequent quarterly credit generation period if credits are issued retrospectively, and within 30 days after the end of each twelve-month credit generation period if credits are issued prospectively, the credit generator shall submit the activity level specified in paragraph (i)(1).

(3) Notwithstanding paragraph (i)(2), if the initial credit generation period begins prior to a quarter and is two months or less, the credit generator shall submit the information specified in paragraph (i)(1) within 30 days after the end of the first quarterly credit generation period. For an initial credit generation period that is greater than two months, the credit generator shall submit the information specified in paragraph (i)(1) within 30 days after the end of the initial credit generation period.

(4) The credit generator shall maintain all data required to be gathered, computed, or reported pursuant to this rule for three years after each quarterly report is submitted to the District.

(j) Credit Use

MSERCs generated under this rule may be used as RTCs under the provisions of Regulation XX - Regional Clean Air Incentive Market (RECLAIM).

(k) Quarterly Validation and Reconciliation

(1) For MSERCs issued retrospectively pursuant to paragraph (h)(4), the reported activity level submitted pursuant to paragraphs (i)(2) and (i)(3) shall be reviewed by the Executive Officer upon submittal to validate the activity level. If the review indicates that the activity level reported is not consistent with records submitted pursuant to paragraph (i)(1), the Executive Officer shall appropriately adjust the activity level reported.

(2) The Executive Officer shall validate the activity level reported based on the analysis specified under paragraphs (k)(1) within 30 days after the reported activity level is submitted pursuant to paragraphs (i)(2) and (i)(3) for MSERCs issued retrospectively.

(3) For MSERCs issued prospectively pursuant to paragraph (h)(5), the actual activity level submitted pursuant to paragraph (j)(4) shall be reviewed upon submittal to evaluate if any shortfall exists between the actual activity level and activity level specified by the credit generator pursuant to subparagraph (h)(4)(B).

(4) If a shortfall exists between the actual and projected activity levels, the credit generator and user are subject to the penalty provisions specified under subdivision (l).

(5) If the actual activity level exceeded the activity level specified by the credit generator pursuant to subparagraph (h)(4)(B), then the Executive Officer shall after performing the evaluation required by paragraph (k)(3) issue additional MSERCs equal to the amount of the increase and pursuant to subdivision (h) for use in the current RECLAIM Compliance Cycle that ends no later than six months from the last day of the credit generation period of which the increase in activity level occurred.

(l) Penalties

(1) If a shortfall exists pursuant to paragraph (k)(3), credits equal to 110 percent of the shortfall shall be obtained and surrendered to the Executive Officer such that the applicant shall retire NO_X MSERCs generated under the same or different Application or RTCs that are approved and designated for use within the same RECLAIM cycle or if not available, from the next RECLAIM cycle.

(2) Any person submitting an Application who falsifies information in the Application or fails to implement any provision of the Application, shall be subject to the penalties specified in the Health and Safety Code for violation of District rules and shall be grounds for the Executive Officer to take one or more of the following actions:

(A) disapprove the Application and void all previously issued MSERCs, and those already converted to RTCs, that have not yet expired;

(B) designate the applicant to be ineligible to generate MSERCs; or

(C) access the penalty specified in paragraph (l)(1).

(3) Any person who uses MSERCs converted into RTCs generated under this rule at a

RECLAIM facility where previously issued MSERCs, and those already converted to RTCs, that have not yet expired are voided, shall be subject to the provisions specified in Rule 2010 - Administrative Remedies and Sanctions for RECLAIM rule violations. If there are multiple credit holders or users of credits generated under the same Application, each holder or user shall retire MSERCs or RTCs according to their prorated share of credits purchased.

(m) Program Review

(1) On or before April 2003 and biannually thereafter, up until credits are discontinued according to the source category evaluation performed pursuant to subdivision (g), the Executive Officer shall complete a review and present a report to the Governing Board that includes but not be limited to the following information:

(A) General description of projects participating in the pilot program and the amount of NO_X MSERCs, including the amount converted to RTCs, generated under the pilot program;

(B) The location of the credit generation projects and facilities using RTCs under this pilot program;

(C) The amount of NO_X MSERCs retired to benefit the environment; and

(D) The amount of concurrent non-NO_X emission reductions such as PM and toxic air contaminants, generated under the pilot program that have been retired to benefit the environment.

(2) The Governing Board may suspend approval of pending Applications and receipt of additional Applications through a noticed public hearing.

Table 1
NO_X Baseline and Optional Emission Factors

Refrigeration Unit Type	NO_X Baseline Emission Factor (g/kW-hr)	NO_X Optional Emission Factor (g/kW-hr)[1]
Truck	4.0	0.1
Trailer	4.7	0.1

1. Based on an in-Basin NO_X emission factor of 0.232 pounds per megawatt-hour.

(Adopted November 9, 2001)

RULE 1634. PILOT CREDIT GENERATION PROGRAM FOR TRUCK STOPS

(a) Purpose

The purpose of this rule is to provide opportunities to generate NO_x mobile source emission reduction credits (MSERCs) for use in RECLAIM through the use of electric power in lieu of the operation of diesel-powered engines for truck cabs, and/or trailer refrigeration units.

(b) Applicability

(1) This rule applies to persons who voluntarily elect to generate NO_x MSERCs, which may be used in RECLAIM pursuant to Rule 2008 – Mobile Source Credits, through the use of electric power instead of operating diesel-powered engines at truck stops for:

(A) trailer refrigeration units to operate in electric standby mode;

(B) on-board electrical systems; or

(C) heating, ventilating, and air conditioning (HVAC) to truck cabs at truck stops.

(2) This rule does not apply to any:

(A) emission reductions produced by monies from any public air quality related funding program including but not limited to Rule 2202, the Carl Moyer Memorial Air Quality Standards Attainment Program, or AB2766 funding;

(B) emission reductions required pursuant to any law, rule, or regulation, or legal instrument such as a legal settlement or consent decree; or

(C) truck cab or chassis equipped with auxiliary power units.

(c) Definitions

(1) ACTIVITY LEVEL (AL) means for the purpose of this rule, the number of hours and the kilowatt-hours (kW-hr) electric power is supplied at a truck stop for the purposes of providing electric power to provide HVAC to the truck cab, operate on-board electric systems, and operate trailer

refrigeration units in electric standby mode per quarter for retrospective credit issuance and per year for prospective credit issuance.

(2) APPLICATION means for the purpose of this rule, the Rule 1634 MSERC Application as specified in subdivision (e).

(3) AUXILIARY ENGINE means an off-road diesel-fueled engine less than 100 horsepower which is used to power a trailer refrigeration unit.

(4) AUXILIARY POWER UNIT means any device powered by a small diesel-fueled engine externally mounted on the truck cab or chassis which is designed to provide heat and electric power for air conditioning and on-board electrical systems.

(5) BASELINE EMISSION FACTOR (EF_{base}) means for the purpose of this rule, the emission factor used to quantify annual emissions from a diesel-fueled engine used to supply power to a trailer refrigeration unit or for truck idling.

(6) CREDIT GENERATOR means the entity that has the rights through direct ownership, agreement, or contract to provide electric energy to truck operators while at truck stops in order to operate their on-board electric systems and trailer refrigeration units in electric standby mode, and provide HVAC to the truck cab, or if no agreement or contract exists, the operator of the truck stop.

(7) CREDIT GENERATION PERIOD means for the purpose of this rule, the timeframe that MSERCs are being generated and begins on the date that the requirements of subdivision (d) are met. The first segment of the credit generation period, which may be 3 months or less, is referred to as the "initial credit generation period" and each 3-month segment thereafter that begins on a calendar quarter is referred to as the "quarterly credit generation period." The "first two annual credit generation periods" is the first eight full quarterly credit generation periods.

(8) CREDIT ISSUANCE PERIOD means the timeframe that MSERCs are issued and begins on the date that the requirements of subdivision (h) are met.

(9) DIESEL FUEL means any fuel that is commonly known as diesel fuel No. 1-D or 2-D, or meets the specifications in ASTM D 975, Standard Specifications for Diesel Fuel Oils.

(10) DISTRICT means the geographical area defined by Rule 103 – Definition of Geographical Area.

(11) ELECTRIC STANDBY MODE means the operation of a trailer refrigeration unit using an electric motor powered by electricity supplied at a truck stop.

(12) EVALUATION YEAR means for the purpose of this rule, 2006 which represents the initial evaluation year and subsequent years thereafter as determined pursuant to paragraph (g)(3) during which the AQMD, CARB, and EPA will assess whether MSERCs may continue to be generated or if a portion or all future MSERCs need to be discontinued or discounted to ensure credits remain surplus.

(13) HEATING, VENTILATING, AND AIR CONDITIONING (HVAC) means for the purpose of this rule, pre-conditioned air which is heated or cooled from an external source powered by electricity and used to provide a comfortable environment for the inside space of a truck cab.

(14) IN-CAB APPLIANCE means any electric-powered device used for comfort or personal use including, but not limited, to heaters, fans, air conditioners, microwaves, televisions, personal computers, stereos, and refrigerators.

(15) MOBILE SOURCE EMISSION REDUCTION CREDIT (MSERC) means for the purpose of this rule, emission reduction credits that meet the requirements of this rule and are issued as specified in paragraph (h)(2).

(16) ON-BOARD ELECTRICAL SYSTEM means any in-cab appliance or electric-powered device installed in a truck such as an electric engine block heater which is capable of being operated on 110 Volts AC power from an external plug-in source.

(17) OPTIONAL EMISSION FACTOR (EF_{opt}) means for the purpose of this rule, the emission factor used to quantify annual emissions from the use of electric power at a truck stop to operate trailer refrigeration units in electric standby mode, on-board electrical systems, and by providing HVAC to the truck cab and is based on either an in-Basin power generation emission factor of 0.1 grams per kilowatt-hour or 0.0 grams per kilowatt-hour if on-site generation using zero-emission technologies is used.

(18) PROSPECTIVE CREDIT ISSUANCE OR PROSPECTIVELY means that MSERCs will be issued annually prior to generating credits.

(19) QUARTER OR QUARTERLY is any three-month period from January 1 to March 31, April 1 to June 30, July 1 to September 30, or October 1 to December 31, inclusive.

(20) RECLAIM FACILITY means any stationary source subject to Regulation XX, pursuant to Rule 2001 - Applicability.

(21) RETIRE OR RETIRED means that the credit, regardless of the expiration date of the credit, can no longer be transferred or used.

(22) RETROSPECTIVE CREDIT ISSUANCE OR RETROSPECTIVELY means that MSERCs will be issued quarterly following submittal of the actual activity level specified in paragraph (i)(1) and the quarterly validation has been completed pursuant to subdivision (k).

(23) SURPLUS means that emission reductions achieved throughout the duration of the emission reduction activity that are not required or relied upon by any local, state, or federal rule, or regulation, and the federal Clean Air Act; and are not required or relied upon in an attainment demonstration, reasonable further progress demonstration, or emissions inventory thereby ensuring that there is no double counting of emission reductions.

(24) TRUCK means an on-road Class 8 heavy-duty diesel-fueled vehicle having a gross vehicle weight of greater than 33,000 pounds.

(25) TRUCK ENGINE means an on-road diesel-fueled engine used to supply power to a truck for propulsion.

(26) TRUCK OPERATOR means the person that operates the truck.

(27) TRUCK STOP means a for-profit facility that provides parking spaces and other services for trucks and their drivers.

(28) TRAILER REFRIGERATION UNIT means a refrigeration chiller powered by a diesel-fueled auxiliary engine or electric motor that is mounted on a trailer container for the purpose of providing chilled air to the contents of the trailer. For purposes of this rule, trailer refrigeration units use engines that are separate from the truck engine.

(29) ZERO-EMISSION TECHNOLOGIES mean any source of electrical power that does not produce NO_x emissions such as fuel cells and solar power.

(d) Credit Generator Requirements

(1) Any person that elects to generate MSERCs under this rule shall meet one or more of the following requirements:

(A) Provide electric power while the truck engine is off and is parked at a truck stop to operate on-board electrical systems;

(B) Provide heating, ventilating, and air conditioning (HVAC) to truck cabs while the truck engine is off and is parked at a truck stop; or

(C) Provide electric power to power a trailer refrigeration unit while an auxiliary diesel engine is off and its truck and trailer are parked at a truck stop.

(2) In addition to paragraph (d)(1), any person that elects to generate MSERCs under this rule shall meet all of the following requirements:

(A) Demonstrate that the infrastructure, which includes a stationary ground power supply and transmission system necessary to provide electric power at the proper frequency and voltage at a truck stop for use by in-cab truck appliances, on-board systems, or trailer refrigeration units operating in electric standby mode, is installed no earlier than October 1, 2001;

(B) Demonstrate that the infrastructure, which includes an external device for supplying pre-conditioned air for HVAC for cooling and heating truck cabs at truck stops, is installed no earlier than October 1, 2001;

(C) Demonstrate that the credit generator has the right through direct ownership or an agreement or contract to provide electric energy or HVAC to heavy-duty trucks parked at the truck stop;

(D) Demonstrate that each truck stop is equipped with an electronic system capable of recording the location, date, time, truck operator, truck license number, and the number of hours electric power is consumed and the amount of energy consumed to operate on-board electrical systems, trailer refrigeration units, and provide HVAC to the truck cab per truck visit;

(E) Demonstrate that each truck stop is equipped with a totalizing hour and kilowatt-hour meter or electronic system capable of measuring the number of hours electric power is consumed in half hour increments and the amount of electric power consumed to operate on-board electrical systems, trailer refrigeration units, and provide HVAC to the truck cab per truck visit;

(F) Demonstrate that the truck stop is located in the District;

(G) Submit an Application as specified in subdivision (e);

(H) Demonstrate compliance with the monitoring, recordkeeping, and reporting requirements specified in subdivision (i);

(I) Demonstrate that any on-site generation of electric power used to provide power for any of the requirements in paragraph (d)(1) is supplied by solar power or fuel cells; and

(J) Charge an hourly service fee to each truck operator for the use of any service specified in subparagraphs (d)(1)(A) or (d)(1)(B) that is greater than or equal to $1.00 per hour.

(e) Application

(1) Any person that elects to generate MSERCs under this rule shall submit an Application to the District after adoption of this rule and no later than 30 days after installation of the necessary infrastructure pursuant to subparagraphs (d)(2)(A) or (d)(2)(B). No Applications may be submitted after January 1, 2004. The Application shall include the following:

(A) A description of the truck stop, including at a minimum:

(i) location of the truck stop; and

(ii) facility plot plan including locations and total number of truck parking stalls identifying those which will be used to provide electric power and HVAC.

(B) The projected initial service date that the credit generator will provide electrical power and HVAC to trucks that would represent the beginning of the credit generation period;

(C) Specification of whether zero-emission technologies are used to provide electrical power for the project; and

(D) Identification of the intended user(s) of the MSERCs, if available.

(2) If the initial installation of the infrastructure specified in subparagraphs (d)(2)(A) or (d)(2)(B) is before the Application is approved, the Application shall include the following additional information:

(A) Proof of installation of the infrastructure specified in subparagraphs (d)(2)(A) or (d)(2)(B);

(B) Proof the credit generator has the right through direct ownership or an agreement or contract to provide electric power and HVAC to heavy-duty trucks and trailer refrigeration units at truck stops.

(3) The Application shall be deemed a plan, and plan fees shall be assessed in accordance with Rule 309 – Fees for Regulation XVI.

(4) The Executive Officer shall approve or disapprove the Application and any subsequent revisions submitted pursuant to paragraph (e)(5), in writing within 90 days of submittal of a complete Application or Application revision.

(5) Any person that submits an Application may amend the Application to:

(A) revise information provided under subparagraphs (e)(1)(A) through (e)(1)(D) at any time;

(B) include information required under subparagraphs (h)(4)(A) and (h)(4)(B) if the credit generator elects to have MSERCs issued prospectively after the first two annual credit generation periods; or

(C) revise the activity levels specified in subparagraph (h)(4)(B) no later than 180 days after the beginning eligibility credit issuance date pursuant to subparagraph (h)(2)(C).

(f) MSERC Quantification

(1) MSERCs generated under subparagraphs (d)(1)(A) and (d)(1)(B) shall be quantified using the following equation:

$$\text{MSERC} = \frac{\left[(EF_{base})(AL_{hr}) - (EF_{opt})(AL_{kW-hr})\right]}{454}$$

Where:

MSERC	=	Mobile source emission reduction credit (pounds of NO_x)
EF_{base}	=	Baseline emission factor (g/hr)
EF_{opt}	=	Optional emission factor (g/kW-hr)
AL_{hr}	=	Activity level (hr)
AL_{kW-hr}	=	Activity level (kW-hr)
454	=	Conversion factor from grams to pounds

(2) MSERCs generated under subparagraph (d)(1)(C) shall be quantified using the following equation:

$$\text{MSERC} = \frac{\left(EF_{base} - EF_{opt}\right) \text{x AL}}{454}$$

Where:

MSERC	=	Mobile source emission reduction credit (pounds of NO_x)
EF_{base}	=	Baseline emission factor (g/kW-hr)
EF_{opt}	=	Optional emission factor (g/kW-hr)
AL	=	Activity level (kW-hr)
454	=	Conversion factor from grams to pounds

(3) The value of the NO_x baseline emission factor for paragraph (f)(1) shall be 80.7 g/hr.

(4) The value of the NO_x baseline emission factor for paragraph (f)(2) shall be 4.7 g/kW-hr or if the credit generator elects to use a different value, the value shall be based on 92 percent of NO_x + nonmethane hydrocarbon (NMHC) EPA certified emission level pursuant to 40 CFR Part 89.112 and Subparts D and E for each diesel-fueled auxiliary engine.

(5) The value of the NO_x optional emission factors for paragraphs (f)(1) and (f)(2) shall be equal to:

(A) 0.1 g/kW-hr; or

(B) 0.0 g/kW-hr if the electric power is provided from zero-emissions technologies.

(6) The actual activity level used to quantify the MSERCs shall be determined pursuant to subdivision (i) and either the quarterly validation if credits are issued retrospectively or twelve-month reconciliation if credits are issued prospectively pursuant to subdivision (k).

(g) Source Category Evaluation

(1) On or before July 1, 2006, the Executive Officer with CARB and EPA shall complete an evaluation of truck idling and truck and trailer refrigeration units and agree whether future MSERCs need to be discontinued or discounted to ensure credits remain surplus.

(2) The evaluation shall include, but is not limited to, an assessment of current and future local, state, and federal rules and regulations affecting truck idling and truck and trailer refrigeration units at truck stops as well as an evaluation of the baseline emission factor to reflect current information.

(3) After the initial evaluation, the evaluation performed in paragraph (g)(1) shall be completed on a timeframe as agreed to by the AQMD, CARB, and EPA, but not more than once per year.

(4) Subsequent evaluations performed pursuant to paragraph (g)(3) shall be completed at least six months prior to end of each evaluation period specified in paragraph (g)(3), for the remainder of the pilot program.

(5) No future MSERCs shall be issued if the evaluation is not completed or the AQMD, CARB and EPA do not agree on whether future MSERCs need to be discontinued or the amount that the MSERCs need to be discounted.

(h) Credit Issuance

(1) The Executive Officer shall issue MSERCs provided:

(A) the Application has been approved by the Executive Officer;

(B) the credit generator has submitted the information specified in subparagraphs (e)(2)(A) and (e)(2)(B);

(C) the credit generator has submitted records and reports pursuant to subdivision (i); and

(D) the Executive Officer has completed the quarterly validation of the activity level pursuant to subdivision (k) if the MSERCs are issued retrospectively pursuant to paragraph (h)(3).

(2) The Executive Officer shall issue MSERCs:

(A) to the credit generator that meets the applicability requirements pursuant to subdivision (b) and the requirements pursuant to subdivision (d);

(B) retrospectively through the first two annual credit generation periods pursuant to paragraph (h)(3);

(C) either retrospectively for subsequent quarters following the end of the first two annual credit generation periods pursuant to paragraph (h)(3) or prospectively for subsequent annual credit generation periods following the end of the first two annual credit generation periods pursuant to paragraph (h)(4); and

(D) designated with a beginning and ending date based on the date of credit issuance.

(3) The Executive Officer shall issue MSERCs retrospectively in quarterly increments, in pounds of NO_x:

(A) for each quarter through the end of the first two annual credit generation periods;

(B) for subsequent quarterly credit generation periods following the end of the first two annual credit generation periods if the credit generator elects to continue retrospective credit issuance and has not submitted a written request to the Executive Officer pursuant to subparagraph (h)(4)(A) to issue MSERCs prospectively;

(C) for any quarterly generation period between the end of the first two annual credit generation periods and the next annual credit generation period that coincides with either the RECLAIM Compliance Cycle 1 or 2 as designated by the credit generator pursuant to paragraph (h)(7) if the credit generator elects to have MSERCs issued prospectively; and

(D) after the Executive Officer completes the quarterly validation pursuant to subdivision (k) and within 30 days after the submittal of the actual activity level pursuant to paragraph (i)(2).

(4) The Executive Officer shall issue MSERCs prospectively in annual increments, in pounds of NO_x:

(A) following the end of the first two annual credit generation periods and each annual credit generation period thereafter for a period not to exceed five years, provided the credit generator submits a written request to amend the Application for prospective credit issuance and designation of the RECLAIM Compliance Cycle for each annual credit generation period to the Executive Officer within 30 days after the end of the first two annual credit generation periods;

(B) in an amount based on an activity level as specified by the credit generator that is included in an amendment to their Application, that shall not exceed 120% of the annual average activity level that was reported and validated through the first two annual credit generation periods; and

(C) beginning on either a RECLAIM Cycle 1 or 2, as designated by the credit generator pursuant to subparagraph (h)(4)(A).

(5) The Executive Officer shall discount MSERCs upon issuance by:

(A) nine percent which will be retired for the benefit of the environment; and

(B) one percent which will either fund the Rule 518.2 – Federal Alternative Operating Conditions offset program, or if Rule 518.2 funding is not needed, be retired for the benefit of the environment.

(6) Any reductions other than NO_x that results from implementation of projects subject to this rule shall be retired for the benefit of the environment and ineligible for transfer or use.

(7) Notwithstanding Rule 2008 – Mobile Source Credits, for MSERCs issued retrospectively pursuant to paragraph (h)(3), MSERCs converted to RTCs shall be issued for the RECLAIM Compliance Cycle 1 or 2 that the credit generator selects provided the initial or quarterly credit generation period and subsequent quarterly credit generation period coincides with the entire RECLAIM Compliance Cycle plus the reconciliation period of that cycle.

(8) Notwithstanding Rule 2008 – Mobile Source Credits, for MSERCs issued prospectively pursuant to paragraph (h)(4), MSERCs converted to RTCs shall be issued for either RECLAIM Compliance Cycle 1 or 2 provided that each annual credit generation period coincides with the entire cycle selected. If the initial credit generation period begins prior to the start of a complete RECLAIM Compliance Cycle, that portion of MSERCs converted to RTCs shall be issued for the current or previous cycle provided that this initial credit generation period completely coincides with the cycle selected.

(9) Any MSERCs not used by the specified expiration date shall be retired to benefit the environment and be ineligible for transfer or use.

(i) Monitoring, Recordkeeping, and Reporting

(1) For each truck that uses electric energy at a truck stop to operate trailer refrigeration units in electric standby mode, power on-board electric systems, and/or is provided with HVAC to the truck cab, credit generators shall monitor and maintain records for the initial and each subsequent quarterly credit generation periods of the following:

(A) Number of hours in half-hour increments rounded to the nearest half-hour that the diesel-powered truck engine is not operated while electric energy is consumed to power on-board electric systems and/or HVAC for the interior cab, using an electronic system capable of recording the location, date, time, truck operator, and truck license number per truck visit;

(B) Number of kilowatt-hours (kW-hr) of electric energy supplied to the truck for use by on-board electric systems and/or HVAC that is supplied to the interior cab, using data recorders capable of recording the location, date, time, the hourly service fee, a written certification that the service fee charged to each truck operator meets the requirements specified pursuant to subparagraph (d)(2)(J), truck operator, truck license number, and energy consumption in kilowatt-hours (kW-hr);

(C) Numbers of kilowatt-hours (kW-hr) that each trailer refrigeration unit consumes while in electric standby mode using a kilowatt-hour meter or electronic system capable of measuring and recording the electric power supplied in kilowatt hours (kW-hr); and

(D) For those credit generators electing to use a different value of the baseline emission factor for paragraph (f)(2) other than the default value of 4.7 g/kW-hr, identification of the existing diesel-fueled engine used to power the trailer refrigeration unit, including engine manufacturer, engine model, engine model year, engine displacement, engine horsepower, and EPA certified emission factor.

(2) Within 30 days after the end of the initial and each subsequent quarterly credit generation period if credits are issued retrospectively, and within 30 days after the end of each twelve-month credit generation period if credits are issued prospectively, the credit generator shall submit the activity level specified in paragraph (i)(1).

(3) Notwithstanding paragraph (i)(2), if the initial credit generation period begins prior to a quarter and is two months or less, the credit generator shall submit the information specified in paragraph (i)(1) within 30 days after the end of the first quarterly credit generation period. For an initial credit generation period that is greater than two months, the credit generator shall submit the information specified in paragraph (i)(1) within 30 days after the end of the initial credit generation period.

(4) The credit generator shall maintain all data required to be gathered, computed, or reported pursuant to this rule for five years after each quarterly report is submitted to the District.

(5) The monitoring devices specified in subparagraphs (i)(1)(A) and (i)(1)(B) may be combined into one system and may record the data from more than one parking space provided the requirements of subparagraphs (i)(1)(A) and (i)(1)(B) are met.

(j) Credit Use

MSERCs generated under this rule may be used as RTCs under the provisions of Regulation XX – Regional Clean Air Incentive Market (RECLAIM).

(k) Quarterly Validation and Reconciliation

(1) For MSERCs issued retrospectively pursuant to paragraph (h)(3), the reported activity level submitted pursuant to paragraphs (i)(2) and (i)(3) shall be reviewed by the Executive Officer upon submittal to validate the activity level. If the review indicates that the activity level reported is not consistent with records specified in paragraph (i)(1), the Executive Officer shall appropriately adjust the activity level reported.

(2) The Executive Officer shall validate the activity level reported based on the analysis specified under paragraphs (k)(1) within 30 days after the reported activity level is submitted pursuant to paragraphs (i)(2) and (i)(3) for MSERCs issued retrospectively.

(3) For MSERCs issued prospectively pursuant to paragraph (h)(4), the actual activity level submitted pursuant to paragraph (i)(2) shall be reviewed upon submittal to evaluate if any shortfall exists between the actual activity level and activity level specified by the credit generator pursuant to subparagraph (h)(4)(B).

(4) If a shortfall exists between the actual and projected activity levels, the credit generator and user are subject to the penalty provisions specified under subdivision (l).

(5) If the actual activity level exceeded the activity level specified by the credit generator pursuant to subparagraph (h)(4)(B), then the Executive Officer shall after performing the evaluation required by paragraph (k)(3) issue additional MSERCs equal to the amount of the increase and pursuant to subdivision (h) for use in the current RECLAIM Compliance Cycle that ends no later than six months from the last day of the credit generation period of which the increase in activity level occurred.

(l) Penalties

(1) If a shortfall exists pursuant to paragraph (k)(3), credits equal to 110 percent of the shortfall shall be obtained and surrendered to the Executive Officer such that the applicant shall retire NO_x MSERCs generated under the same or different Application or RTCs that are approved and designated for use within the same RECLAIM cycle or if not available, from the next RECLAIM cycle.

(2) Any person submitting an Application who falsifies information in the Application, fails to implement any provision of the Application, or fails to charge the minimum service fee as specified in subparagraph (d)(2)(J) shall be subject to the penalties specified in the Health and Safety Code for violation of District rules and shall be grounds for the Executive Officer to take one or more of the following actions:

(A) disapprove the Application and void all previously issued MSERCs, and those already converted to RTCs, that have not yet expired;

(B) designate the applicant to be ineligible to generate MSERCs; or

(C) access the penalty specified in paragraph (l)(1).

(3) Any person who uses MSERCs converted into RTCs generated under this rule at a RECLAIM facility where previously issued MSERCs, and those already converted to RTCs, that have not yet expired are voided, shall be subject to the provisions specified in Rule 2010 – Administrative Remedies and Sanctions for RECLAIM rule violations. If there are multiple credit holders or users of credits generated under the same Application, each holder or user shall retire MSERCs or RTCs according to their prorated share of credits purchased.

(m) Program Review

(1) On or before April 2003 and biannually thereafter, up until credits are discontinued according to the source category evaluation performed pursuant to subdivision (g), the Executive Officer shall complete a review and present a report to the Governing Board that includes but not be limited to the following information:

(A) General description of projects participating in the pilot program and the amount of NO_x MSERCs, including the amount converted to RTCs, generated under the pilot program;

(B) The location of the credit generation projects and facilities using RTCs under this pilot program;

(C) The amount of NO_x MSERCs retired to benefit the environment;

(D) The amount of concurrent non-NO_x emission reductions such as PM and toxic air contaminants, generated under the pilot program that have been retired to benefit the environment; and

(E) Identification of compliance and implementation issues, if any, associated with credit generation projects.

RULE 1714. PREVE TIO OF SIG IFICA T DETERIORATIO FOR GREE HOUSE GASES

(a) Purpose

This rule sets forth preconstruction review requirements for greenhouse gases (GHG). The provisions of this rule apply only to GHGs as defined by EPA to mean the air pollutant as an aggregate group of six GHGs: carbon dioxide, nitrous oxide, methane, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride. All other attainment air contaminants, as defined in Rule 1702 subdivision (a), shall be regulated for the purpose of Prevention of Significant Deterioration (PSD) requirements pursuant to Regulation XVII, excluding Rule 1714.

(b) Applicability

The provisions of this rule shall apply to any source and the owner or operator of any source subject to any GHG requirements under 40 Code of Federal Regulations Part 52.21 as incorporated into this rule.

(c) Incorporation by Reference

Except as provided below, the provisions of Title 40 of the Code of Federal Regulations (CFR) Part 52.21, are incorporated herein by reference and made part of the Rules and Regulations of the South Coast Air Quality Management District.

(1) The following subsections of 40 CFR Part 52.21 are excluded: (a)(1), (b)(13), (b)(14), (b)(15), (b)(55-58), (c), (d), (e), (f), (g), (h), (i)(1)((i-v) and (ix-xi), (i)(6-8), (k), (l), (m), (o), (p), (q), (s), (t), (u), (v), (w), (x), (y), (z), (aa), and (cc).

(2) The following term found in 40 CFR Part 52.21(b) is revised as follows:

(A) The term "administrator" means:

(i) "federal administrator" in 40 CFR 52.21(b)(17), (b)(37)(i), (b)(43), (b)(48)(ii)(c), (b)(50)(i), and (b)(51); and

(ii) Executive Officer elsewhere, as defined in Rule 102.

(d) Requirements

(1) An owner or operator must obtain a PSD permit pursuant to this rule before beginning actual construction, as defined in 40 CFR 52.21 (b)(11), of a new major stationary source or major modification to an existing major source as defined in 40 CFR 52.21 (b)(1) and (b)(2), respectively.

(2) Not withstanding the provisions of any other District Rule or Regulation, the Executive Officer shall require compliance with this rule, if applicable, prior to issuing a PSD permit for GHG emissions as required by CAA Section 165

(e) Public Participation

For major stationary sources subject to Rule 1714, after receipt of a complete application, the Executive Officer shall:

(1) Make a preliminary determination whether construction shall be approved, approved with conditions, or disapproved;

(2) Make available for public review a copy of materials the applicant submitted, a copy of the preliminary determination, a copy of the proposed permit, and a copy or summary of other materials, if any, considered in making the preliminary determination. The confidentiality of trade secrets shall be considered in accordance with Section 6254.7 of the Government Code;

(3) Notify the public, by advertisement in a newspaper of general circulation in the District, of the application, the preliminary determination, the degree of increment consumption that is expected from the source or modification, whether an alternative to an EPA approved model was used, and of the opportunity for written public comment. The applicant 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 greater area as determined appropriate by the Executive Officer. The applicant shall provide verification to the Executive Officer that the public notice has been distributed as required by this Section. The notice shall provide 30 days from date of publication for the public to submit written comments;

(4) Send a copy of the notice of public comment to the applicant, the EPA Administrator, and to officials and agencies having cognizance over the location where the proposed construction would occur as follows: any other state or local air pollution control agencies, the chief executives of the city and county where the source would be located, any comprehensive regional land use planning agency, and any State or Federal Land Manager, or Indian Governing body whose lands may be affected by emissions from the source or modification;

(5) Provide opportunity for a public hearing for interested persons to appear and submit written or oral comments on the air quality impact of the source, alternatives to it, the control technology required, and other appropriate considerations;

(6) Consider all written comments submitted within a time specified in the notice of public comment and all comments received at any public hearing(s) in making a final decision on the approvability of the application. The Executive Officer shall make all comments available for public inspection in the same locations where the Executive Officer made available preconstruction information relating to the proposed source or modification.

(7) Make a final determination whether construction should be approved, approved with conditions, or disapproved; and

(8) Notify the applicant in writing of the final determination and make such notification available for public inspection at the same location where the Executive Officer made available preconstruction information and public comments relating to the source.

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

(Adopted September 9, 1994)

RULE 1901. GENERAL CONFORMITY

The provisions of Part 51, Subchapter C, Chapter I, Title 40, of the Code of Federal Regulations (CFR), in effect December 27, 1993, applicable to the subparts listed in this regulation were adopted by the South Coast Air Quality Management District on the Date shown and were made part of Rule 1901 - General Conformity in the Rules and Regulations of the South Coast Air Quality Management District.

The provisions of this Regulation apply to any general federal action which are funded or approved under Title 23 U.S.C. For the purpose of this Regulation, the "State agency primarily responsible for the applicable implementation plan" as used in Part 51, Subchapter C, Chapter I, Title 40, of the CFR shall mean SCAQMD, the word "MPO" as used in Part 51, Subchapter C, Chapter I, Title 40, of the CFR shall mean SCAG. Other deviations from these federal standards as presented in the CFR and which were ordered by the South Coast Air Quality Management District are noted in the affected subpart.

Part 51

Subpart W-	Determining Conformity of General Federal Actions to State or Federal Implementation Plans (Rule 1901 - General Conformity) (58FR63247, Nov. 30, 1993) (Adopted September 9, 1994)